**RC** Range Commanders Council

DOCUMENT 501-97

DOCUMENTATION GROUP

# UNIVERSAL DOCUMENTATION SYSTEM

WHITE SANDS MISSILE RANGE
KWAJALEIN MISSILE RANGE
YUMA PROVING GROUND
DUGWAY PROVING GROUND
ABERDEEN TEST CENTER
NATIONAL TRAINING CENTER

ATLANTIC FLEET WEAPONS TRAINING FACILITY
NAVAL AIR WARFARE CENTER WEAPONS DIVISION
NAVAL AIR WARFARE CENTER AIRCRAFT DIVISION
NAVAL UNDERSEA WARFARE CENTER  DIVISION, NEWPORT
PACIFIC MISSILE RANGE FACILITY
NAVAL UNDERSEA WARFARE CENTER DIVISION, KEYPORT

30TH SPACE WING
45TH SPACE WING
AIR FORCE FLIGHT TEST CENTER
AIR FORCE DEVELOPMENT TEST CENTER
AIR WARFARE CENTER
ARNOLD ENGINEERING DEVELOPMENT CENTER
GOLDWATER RANGE

DISTRIBUTION A:  APPROVED FOR PUBLIC RELEASE;
DISTRIBUTION IS UNLIMITED

**DOCUMENT 501-97**


**UNIVERSAL DOCUMENTATION SYSTEM**



**NOVEMBER 1997**



**Prepared by**

**Documentation Group**
**Range Commanders Council**



**Published by**

**Secretariat**
**Range Commanders Council**
**White Sands Missile Range**
**New Mexico 88002-5110**

# PREFACE

The Range Commanders Council (RCC), recognizing the need for rapid turnaround support of range user requirements and the efficiencies to be derived from electronic word and data processing systems, has in this edition of the handbook, developed a Universal Documentation System (UDS) format adaptable to electronic processing.

This handbook supersedes all previous issues of RCC document 501-90, volumes 1, 2, 3, and supplement 2.  Existing programs may use the previous procedures and forms as agreed between the user and the support agency.  All new programs developing documentation will use the procedures and formats contained in this handbook.

Additional copies of this handbook may be obtained from any agency listed in paragraph 1.6 or from the

> SECRETARIAT
> RANGE COMMANDERS COUNCIL
> ATTN:  STEWS-RCC
> WHITE SANDS MISSILE RANGE, NEW MEXICO  88002-5110
> EMAIL:  rcc@wsmr.army.mil

# TABLE OF CONTENTS

## CHAPTER 1:  INTRODUCTION

## CHAPTER 2:  ORGANIZATION AND STRUCTURE

## CHAPTER 3:  USER AGENCY REQUIREMENTS DOCUMENTATION

## CHAPTER 4:  SUPPORT AGENCY RESPONSE DOCUMENTATION

# CHAPTER 5:  UDS PREPARATION INSTRUCTIONS

# APPENDIXES

# CHAPTER 1

# INTRODUCTION

## 1.1  General

This handbook describes the Universal Documentation System (UDS).  The UDS is used to formally document requesting agency program support requirements and support agency capabilities and commitments to support those requirements.

A complete list of Range Commanders Council (RCC) documents pertaining to the UDS and to other documents can be found in the **List of Available Documents** and copies can be provided through the RCC Secretariat at the address stated in the preface.

## 1.2  Applicability

The UDS is expected to be used by all agencies desiring support from RCC member ranges that have adopted the UDS.  Requesting agency requirements documents and support agency response documents will be prepared in accordance with the format and procedures in this handbook and with those supplemental instructions prepared by the support agencies.

## 1.3  Authority

The Documentation Group (DG) of the RCC has the responsibility for design and control of the UDS.  The UDS and the procedures contained in this handbook have been approved by the RCC.

## 1.4  Handbook Revision

Recommendations for revision of this handbook must be made to the DG.  Such recommendations must include the reason for the change, deletion, or addition and a sample of the change with its instructions.  The DG will review the recommendation, and upon approval, will incorporate these changes.  At the discretion of the DG, approval of recommended changes will be deferred to the RCC Executive Committee (EC).

## 1.5  Definitions

Frequently used terms in this handbook are defined as follows:

**Range/Support Agency.**  An operational facility that provides support services to qualified users as determined by current directives.  The words "range," "center," and "support agency" are used interchangeably.

**User/Requesting Agency.**  Any United States or foreign government agency, industrial organization, or other institution with authority to use range or support agency resources.

**Sponsor.**  Any element of a government, military, or civilian agency with authority to use range or support agency resources.

**User Requirement.**  Any item of support stated by a requesting agency through the UDS.

**Requestor/Supplier Code.**  An element of UDS formats (see subparagraph 2.9.3) as identified in appendix A - Designation for UDS Subscriber Agencies of this handbook.

**Interagency Program.**  The participation of more than one range or support agency in a program.

**Lead Range/Lead Support Agency.**  Responsible range/support agency for coordinating total support planning and operations for a particular program, mission, or test.  The lead range/lead support agency identifies the support required from other agencies and coordinates the total support effort.

1.6   Information and Assistance Sources

Prospective users of range/support agency services may obtain assistance in the preparation of requirements documentation from the agencies listed below:


412 TW/TSRO
Edwards AFB,
CA  93524-6680
PHONE:      DSN - 527-2726      COMMERCIAL - (805) 277-3416
FAX:          DSN - 527-5377      COMMERCIAL - (805) 277-5377


Naval Air Warfare Center Weapons Division
NAWCWPNS CODE 52911EE
Point Mugu, CA  93042-5001
PHONE:      DSN: 351-7856      COMMERCIAL:  (805) 989-7856
FAX:          DSN: 351-7418      COMMERCIAL:  (805) 989-7418

30th Range Squadron/DOUF
Building 7000
816 13th St., Suite 205
Vandenberg AFB, CA  93437-5233
PHONE:      DSN: 276-3953      COMMERCIAL: (805) 734-8232 EXT: 63953
FAX:          DSN: 276-1640      COMMERCIAL: (805) 734-8232 EXT: 61640


ITT/FSC/Code 7600
ITT Federal Services Corp
Vandenberg AFB, CA  93437
PHONE:      DSN: 276-1245      COMMERCIAL: (805) 734-8232, EXT 61245
FAX:          DSN: 275-0364      COMMERCIAL: (805) 734-8232, EXT 50364


45th Space Wing
45SW/XP (Plans)
1201 Minuteman St.
Patrick AFB, FL  32925-3239
PHONE:      DSN: 854-4054      COMMERCIAL: (407) 494-4054
FAX:          DSN: 854-6839      COMMERCIAL: (407) 494-6839


Pacific Missile Range Facility Barking Sands
Kekaha, HI  96752-0128
PHONE:      DSN:                   COMMERCIAL: (808) 335-4231
FAX:          DSN:                   COMMERCIAL: (808) 335-4331


Kwajalein Support Directorate
CSSD-KH-SP
P.O. Box 1500
Huntsville, AL  35807
PHONE:      DSN: 645-1874      COMMERCIAL: (205) 955-1874
FAX:          DSN: 645-1979      COMMERCIAL: (205) 955-1979


Teledyne Brown Eng M/S 132
300 Sparkman Dr. N.W.
Huntsville, AL  35807-7007
PHONE:      DSN:                   COMMERCIAL: (205) 726-2581
FAX:          DSN:                   COMMERCIAL: (205) 726-2695

50th Space Wing
750 OSS/DOX
1080 Lockheed Way Box 058
Sunnyvale CA  94089-1237
PHONE:      DSN: 561-3796      COMMERCIAL: (408) 752-3796
FAX:        DSN: 561-4084      COMMERCIAL: (408) 752-4084


50th Space Wing
50 SW/XPSV
300 O'Malley Ave STE 74
Falcon AFB, CO  80912-3074
PHONE:      DSN: 560-2087      COMMERCIAL: (719) 567-2087
FAX:        DSN: 560-2655      COMMERCIAL: (719) 567-2655


50th Space Wing/XPSV
300 O'Malley STE 74
Falcon AFB, CO  80912-3074
PHONE:      DSN: 560-4661      COMMERCIAL: (719) 567-4661
FAX:        DSN: 560-2655      COMMERCIAL: (719) 567-2655


Goddard Space Flight Center
Center Mission Services Manager, Code 450
Greenbelt, MD  20771
PHONE:      DSN:               COMMERCIAL: (301) 286-6724
FAX:        DSN:               COMMERCIAL: (301) 286-1725


NASA-Air Force Management Office/IM-NAO
Kennedy Space Center, FL  32899
PHONE:      DSN: 854-6272      COMMERCIAL: (407) 494-6272
FAX:        DSN: 854-9166      COMMERCIAL: (407) 494-9166


U.S. Army White Sands Missile Range/STEWS-NRO-BP
White Sands Missile Range, NM  88002-5113
PHONE:      DSN: 258-3812      COMMERCIAL: (505) 678-3812
FAX:        DSN: 258-1904      COMMERCIAL: (505) 678-1904

NASA-Air Force Management Office/IM-NAO
Kennedy Space Center, FL
PHONE:     DSN: 854-6274     COMMERCIAL: (407) 494-6274
FAX:       DSN: 854-9166     COMMERCIAL: (407) 494-9166


99th Range Group/CCXT
3770 Duffer Drive
Nellis AFB, NV
PHONE:     DSN: 682-3655     COMMERCIAL: (702) 652-3655
FAX:       DSN: 682-3808     COMMERCIAL: (702) 652-3808

# CHAPTER 2

# ORGANIZATION AND STRUCTURE

## 2.1   Purpose

The UDS provides a common language and format for stating requirements and for preparing support responses.  The UDS encompasses documentation generated by user agencies which states program, mission, or test requirements and those response documents generated by the support agencies to define the support to be provided.

## 2.2   Objectives

The UDS objectives are

- to establish a common language and format to provide more effective communication between the user and support agency,

- to standardize requirement and support methodology between the user and the support agency which achieves an effective planning/performance interface, and

- to provide a standard yet flexible and dynamic system that meets the requirement and support needs of both simple and complex programs.

## 2.3   Concept

The UDS is intended to establish standardization, yet be flexible enough to be used by a number of different agencies.  This flexibility permits individual instructions to be prepared by each support agency for implementation of the UDS at that agency.  These instructions can contain specific procedures for the scope, submission, and revision of documentation.

## 2.4   System Criteria

The UDS is based on a common structure that enables users to employ one basic format when presenting requirements to support agencies.  This structure is defined in a document outline that combines related subjects of the various program, mission, or test phases into broad categories for simplicity and ease of understanding.  This system identifies the necessary information that should pass between the user and all contributing agencies that support the program, mission, or test.

## 2.5   Document Organization

The UDS Handbook describes three levels of user and support agency documentation:

| LEVEL | REQUIREMENTS DOCUMENT | RESPONSE DOCUMENT |
|:---:|:---|:---|
| 1 | Program Introduction (PI) | Statement of Capability (SC) |
| 2 | Program Requirements Document (PRD) | Program Support Plan (PSP) |
| 3 | Operation Requirements (OR) | Operations Directive (OD) |

Level 1 documents (the PI and SC) are used to initiate program support planning between users and support agencies.

Level 2 documents (PRD and PSP) are used to provide additional or more detailed program information with specific application to the more complex programs.

Level 3 documents (OR and OD) are used to request and plan support for specific test operations within an all encompassing program.

### 2.5.1   Level 1 Documents

Program Introduction (PI).  The PI is the initial planning document submitted by a user to the support agency immediately on identification of the scope and duration of a program activity.  The user should submit the PI using the best available information, enabling the support agency to initiate resource and technical planning.  This information, while sometimes fragmentary and incomplete, is of substantial value to the support agency in determining the scope of the program.  For many programs, the PI will eliminate further documentation except for conducting specific operations.

Statement of Capability (SC).  The SC is the support agency's response to the PI.  When properly signed, the SC is evidence that a program has been accepted for support by the support agency.  Support conditions, qualifications, and resources, or other considerations are initially identified in this document which serves as a baseline reference for subsequent acceptance and commitment by the support agency.

### 2.5.2   Level 2 Documents

Program Requirements Document (PRD).  The PRD is prepared by the range user and is a detailed program planning document required for complex or long lead-time programs.

<u>Program Support Plan (PSP)</u>.  The PSP is a response to the requirements presented in the PRD and is prepared by the responsible support agency.

2.5.3  Level 3 Documents

<u>Operations Requirements (OR)</u>.  The OR is a detailed description of the program's requirements for each specific test or series of tests.  It is prepared by the user.

<u>Operation Directive (OD)</u>.  The OD is the support agency's response to an OR and is the detailed plan for implementation of support for a program, mission, specific test, or series of tests.

2.6  Document Extracts

Document extracts relate to requirements placed on a given support agency resulting in the generation of additional requirements that must be placed on other agencies. Requirements relate to the lead support agency concept where one agency is given overall support responsibility when the total support involves a number of agencies.

Examples of document extracts are

<u>Program Requirements Document Extract (PRDE)</u>.  A PRDE becomes necessary when requirements placed on a supporting agency create requirements that must be levied on other agencies.  Requirements are prepared using PRD formats in accordance with the standard UDS outline.

<u>Operation Requirements Extract (ORE)</u>.  An ORE is similar to the PRDE except that it applies to the OR.  It relates to the concept where the lead agency must levy requirements on other agencies.  In general, basic ORE requirements will be extracted from the user's original OR and may be expanded upon by the lead agency.

2.7  Other Documentation

Program, mission, or test requirements documents must be understandable and stand on their own; however, there is some supporting information that must be documented and related to the requirements, so support may be provided. Examples are antenna patterns, trajectory data, pyrotechnics, range safety procedures, schedules, test operation procedures, security guides, and mission go/no go rules.  If this information is documented separately, it must be referenced in the UDS program documentation.

2.8   Draft Documentation Review Conferences

When PI, PRD, and OR drafts are prepared, conferences should be held to discuss the complexity of the support and to consider foreseeable difficulties.  These conferences provide the opportunity to initiate program coordination, to discuss security classifications, and to assess support questions.  The user agency distributes the draft and advises all interested user and support agency personnel when and if they should attend the review conference.

2.9   Document Structure

The UDS provides a building block concept to develop and to present requirements which result from incomplete program objectives to well-defined operational and developmental objectives for the system to be evaluated.

2.9.1  General.  Requirements documents are extensions of each other and are used exclusively or in tandem with each other depending on the size and complexity of the program.

2.9.2  Document Outline.  The UDS document outline in appendix B is a common numbering system providing standard presentation of information and serving as the framework for all documents within the UDS.  Format numbers and associated titles are controlled and assigned by the RCC DG.

The UDS outline is composed of two major groups:

   Formats 1000 - 1999 contain program administrative and technical information

   Formats 2000 - 6999 contain test/mission operational requirements

2.9.3  UDS Formats.  The UDS Formats are structured to provide a definitive area in which to state requirements and specify support agency responses.  The UDS outline, coupled with pre-defined formats and instructions contained in the UDS Handbook, serves as a checklist to prevent pertinent data from being overlooked.  **Only those UDS Formats that best suit the needs of the particular program, mission, or test being documented should be used.**  The UDS documents are not to be limited to the statement of pure requirements or responses.  Informational data may be provided as deemed necessary to clarify stated requirements and responses.  Descriptive pictures, sketches, or graphics are encouraged.  If the information or background material is voluminous, reference to a supplemental document should be considered.  Supplemental documentation should be cross referenced in the UDS document.

## 2.10  Document Implementation

The UDS is designed to accommodate as many conditions as practical.  While it is most desirable to have single level 1 documents (that is, a PI and SC that contain total program information), it is also acceptable to have several PIs and SCs.  This latter approach is used when different support agencies provide support for unique and unrelated phases of program, mission, or test.  For example, one agency supports engine tests for program "X," another agency provides on-orbit support for program "X."

The same philosophy applies to level 2 documents.  A single PRD and PSP will, wherever practical, contain all program level information.  However, it is acceptable to have multiple PRDs and PSPs as explained above.

The most detailed level of requirements and support is contained in level 3 documents which describe specific requirements and support.  The OR/OD documents will be prepared as single or multiple documents as required for effective management at the user and support agencies.

## 2.11  Security Classification

The originating agency of a UDS document is responsible for identifying the information to be protected including application of the proper security classification designators and any other special security markings required.  When the classified sections of large documents are few in number, it may be expedient to provide unclassified basic documents with the classified portions provided in a separate classified document extract.  Classified extracts will have limited distribution and be subject to the control imposed by their classification.  Classified extracts should be cross-referenced in the basic unclassified document.

## 2.12  Document Revision

A revision is considered to be any information added, deleted, or revised in any section of a UDS document.  Revisions may be made either by preparing a completely new document or by submitting the revised information.  In any case, users are requested to discuss all proposed revisions with the lead support agency. Pen and ink revisions submitted by letter are permissible for small changes; however, the changes should be incorporated into the next revision to the document.  The UDS documents will reflect the revision number and date of the revision.  Revisions shall be numbered consecutively beginning at 01.  It is recommended that the basic document be reissued, incorporating all revisions when the number of revisions cause the document to be unmanageable.  The Revision Control and Classification, Format 1030, will be used to identify the scope of the revision and shall be transmitted with any revised pages.  Format 1030 also provides a historical record of revisions made to the document.

A standard change indicator or the use of the symbol "R" in the right-hand margin to identify revised lines in a format is encouraged.  In subsequent revisions of a section, delete all "Rs" applicable to the preceding revision.

2.13  Document Distribution

Each document should contain its own document distribution list (Format 1020). This format lists the agencies or activities to receive the document and the number of copies each should receive.  The originator will identify distribution for requirements documents.

2.14   Document Cancellation

The originator notifies the lead support agency when a PI, PRD, or OR is to be canceled.

# CHAPTER 3

# USER AGENCY REQUIREMENTS DOCUMENTATION

3.1   General

Requirements documents PI, PRD, and OR are prepared by the user agency according to a schedule negotiated by the lead agency and user.   The requirements for a program, mission, or test are included in a PI, PRD or OR, or in combinations as the program, mission, or test size dictate.  The initial issue of each document includes the information needed to present the requirements which are known at the time of issue.  Emphasis should initially be placed on identifying requirements which call for long-range planning action even though specific use or implementation details may not be known.  As more information becomes available, revisions are made to incorporate the additional data.  The prime consideration is to ensure the earliest possible receipt of requirement information at the support agency.  The user is responsible for ensuring that requirements are promptly submitted at the request of the support agency and in accordance with scheduled lead times to allow for planning, funding, software development, and construction; that requirements documents reflect all major requirements; that all requirements are necessary to meet the program, mission/test objectives; and that all requirements have been officially approved and signed.  The user is also responsible for ensuring that each requirements document contains a Format 1020 - Distribution List, and that the list identifies the number of copies needed to fulfill the user organization distribution requirements.

Support agencies will assign a document number, establish a suspense date for the publication of the resulting support documentation, notify the various support organizations of the suspense date, and publish requirements document extracts.

3.2   Requirement Priority Classification

A priority must be defined to evaluate requirements on an overall program, mission, or test basis.  The three classifications, defined next, are mandatory, required, and desired.

**Mandatory**.  A mandatory classification is the minimum requirement that is essential to achieve program, mission, or test objectives.

**Required**.  A required priority is support that would materially aid in achieving all objectives and is necessary for detailed analysis of system performance.

**Desired**.  A desired requirement is any support which can be obtained in addition to the mandatory or required classification.

3.3   Requirements Documentation (PI, PRD, OR)

Requirements documentation is compiled in accordance with the general instructions contained in this handbook and the appended formats.

3.3.1   Program Introduction (PI).  The PI is the document that officially introduces a program, mission, or test to a support agency and establishes the scope of program activity.  Within the defined scope, the user has freedom in planning specific operations in detail.

New program requirements may impose a need for additional tracking coverage, additional data products, different frequencies, or other accommodations not available at the support range.  The criteria and qualifications of such requirements should be stressed in the PI.  Users with programs involving orbital operations or large weapon systems should consider the program in phases.  Phase examples are prelaunch, orbital, recovery, test location, development, and system components.  In these cases, the user should identify those requirements that differ and those that are unique to a particular phase.  If a particular requirement is program-wide and does not differ, then such a distinction is not necessary.

3.3.2   Program Requirements Document (PRD).  The PRD, as a detailed program planning document, contains the user's desired support requirements from the support agency and may contain supplemental information needed for clarity.  The need for a PRD is determined during the analysis of the PI or during early planning meetings and will be stated in the SC.  The user should not delay submittal of the PRD because of incomplete knowledge of support requirements.  The PRD is normally submitted by the user agency according to a schedule negotiated by the lead support agency and the user.

3.3.3   Operation Requirements (OR).  The OR is a mission-oriented document that describes in detail the program's requirements for each mission, specific test, or series of tests and is prepared by the user.  The PRD and OR must be complete documents capable of standing alone.  The OR should not reflect new requirements that were not previously stated in the PI and/or PRD.

3.4   Requirements Documentation Lead Time

Lead times for initial documentation may vary considerably from program to program depending on the scope of support needed.  Requirements documentation lead times are established through negotiation between the user agency and support agency.  Nominal lead times in years, based on past experience, are presented next.

| PROGRAM SUPPORT REQUIRING | LEAD TIME (year) |
|---|---|
| New facility construction. | 3 1/2 |
| Extensive software development or additions to instrumentation. (Not requiring major facility construction.) | 2 1/2 |
| Moderate software development or instrumentation additions funded by the user. | 1 |
| Minor software development or instrumentation improvements. | 1/2 |

# CHAPTER 4

# SUPPORT AGENCY RESPONSE DOCUMENTATION

4.1   General

This chapter pertains specifically to support agency documentation.  Support agency response documents SC, PSP, and the OD are prepared by the support agency in response to the approved requirements prepared and submitted by the user agency.  Response documents are revised by the support agency when requirements are changed or support is revised.

4.2   Support Documentation (SC, PSP, OD)

Support documentation is compiled in accordance with the general instructions contained in this handbook and the appended formats.

4.2.1  Statement of Capability (SC).  The SC provides a response to the user's PI. The PI, in combination with the approved SC, forms a basic agreement between the user and the support agency and guides the more detailed planning directives to support organizations.

Wherever possible, the SC responds to the PI on an item-for-item basis.  Responses may be presented in the general section of each UDS format when further breakdown is not warranted.  In some cases, the support agency may respond to the PI on an exception basis rather than with a definitive support plan.  Also at the discretion of the support agency, commonly supplied items and requirements that can be satisfied with existing capability may be answered in a general all-inclusive statement.  The approach taken depends generally on the nature and the purpose of the program.

When the support agency capability will not meet the requirements stated in the PI, the SC specifies such restraints and limitations.  The SC may also serve to support funding policy directives, provide a rough order of magnitude (ROM) cost estimates, and assign existing facilities such as launch complexes, office space, assembly, and storage areas available to meet requirements stated in the PI.  If the user requires new construction, the SC may provide site approval by the support agency.

4.2.2  Program Support Plan (PSP).  The PSP is the support agency's response to the PRD.  The initial PSP issue includes an item-for-item response to the program requirements which are known at the time of issue and stated in the PRD.

4.2.3  <u>Operations Directive (OD)</u>.  The OD is the support agency's response to the OR and details each support function, the support equipment, the technical configuration, and the personnel duties involved in supporting the test or operation. The OD may provide management information or technical requirements and guidelines.  It is a listing of expected coverage detailing the support posture of the support agency for the test covered by the particular OD.  The OD is normally prepared in sufficient detail to furnish instructions for a specific test or test series.

# CHAPTER 5

# UDS PREPARATION INSTRUCTIONS

5.1   General

The preparation instructions in paragraph 5.2 provide detailed explanations for each data field contained within each UDS format and should be followed by both the user and support agency when creating requirements and support documentation.

Not every format is used by both user and support agencies.  The formats that apply only to users are indicated with an R (user requirement format) and formats that apply only to support agencies are indicated with an S (support format) to the left of the format number as shown in the UDS outline at appendix B.  However, some individual data fields may not apply to either the user or to the support agency.  The guide in each instance should be to provide as much data as possible but not to "force-fill" a data field.

Lastly, by convention, PI and SC documents are limited to the use of formats whose numbers end in "00", for example, 1000, 2200, 5300.

5.2   UDS Format Instructions

## FORMAT 1000 - ADMINISTRATIVE

This format is used to enter any administrative information of a general nature pertaining to the program or mission.  The codes are to be completed if applicable for clarification of the requirement or information item and will be used throughout the documentation during the course of the program.

ITEM NO.:
A sequential number, beginning at "01" identifying each requirement, response, or informational item documented.  The item number used for responses to requirements will be the same as that of the corresponding item number appearing in the PRD/OR.  The corresponding PRD/OR section number will also be listed for clarification.  Also, if there are supplemental support agency generated information items, explain the items on UDS Format 1052 - Special Code Definition.

REQUESTER:
A code, identified on UDS Format 1052 - Special Code Definition, assigned to the requester of a requirement.  Subrequesters, similarly identified will be indicated by the

use of a slash (/) immediately following the requester code, for example, T/DE22 might indicate a requirement established by the NASA Johnson Space Center Flight Requirements Office.  Each requester/subrequester shall be separated by a space.  It is recommended that, where possible, either the assigned agency alphabetical code or the agency acronym, shown in the UDS Handbook, appendix A, be used as standard requester codes.

SUPPLIER:
A code, identified on UDS Format 1052 - Special Code Definition, assigned to the organization providing support.  Subsuppliers, similarly identified by the use of a slash (/) immediately following the supplier code, might indicate a response provided by the host base.  It is recommended, where possible, either the assigned agency alphabetical code or the agency acronym, shown in the UDS Handbook, appendix A, be used as standard supplier/subsupplier codes.

TEST CODE:
A code, identified on UDS Format 1051 - Test Code Definition, assigned to a specific test requirement or information item which will identify the various test activities.  These test codes will be used as a method of correlating support requirements to the test activity involved such that any support requirement referenced to a test code indicates that this support will be required, during the particular test program activity.

INFORMATION:
Enter any administrative information that will help clarify the submission of requirements or documentation procedures for the program or individual missions.  Do not include detailed information required on Formats 1010 through 1099.

TREATY COMPLIANCE:
Indicate that competent authority has reviewed the program for applicability under international treaties such as Strategic Arms Reduction Treaty (START), Intermediate-Range Nuclear Forces (INF) Treaty, Open Skies Treaty (OST), Anti-ballistic Missile (ABM) Treaty, and Chemical Weapons Convention (CWC).  Program support requirements resulting from compliance with a treaty should be identified in the appropriate technical section of this requirements document.

ENVIRONMENTAL REQUIREMENTS:
Potential environmental impacts and permitting requirements will be analyzed, evaluated and documented using the National Environmental Policy Act (NEPA) process.  Following the submittal of an appropriate agency environmental analysis document, the Host Environmental Management Planning Function will determine the necessity for additional environmental evaluation, analysis, and documentation.  These actions will result in either a categorical exclusion (CATEX), an Environmental Assessment (EA), or an Environmental Impact Statement (EIS).

PRECEDENCE RATING:
Enter the applicable precedence rating that is assigned to the program.

PRIORITY:
Enter the priority of the program, mission, or test.

INITIATION DATE:
Indicate the date when support is first required.  Dates for special facilities or unique instrumentation should be entered in REMARKS.

COMPLETION DATES:
Indicate the date when the program, mission, or test is planned to be completed or when it no longer requires support.

SPONSORING AGENCY:
Enter the military or government organization which has cognizance and prime responsibility for the program.

BASIC CONTRACT NO.:
Enter the basic contract number for the program, where applicable.

AUTHORITY (REFERENCES):
List the basic document which constitutes authority for conduct of the program.

REMARKS:
Enter the reason for security classification and special handling requirement.  List other contractors and their respective contract numbers when necessary.  Enter, if necessary, general information pertinent to the applicability and authorization of the document.

APPROVAL:
Use these entries for approval by the requesting agencies of the needs submitted.  Enter the name, rank (if applicable), title, agency, phone number, and date.  Leave space for signature.


## FORMAT 1010 - APPROVAL AUTHORITY

This format is used as an authorization, granted by requesting agencies to the support agencies for the conduct of operations relevant to the successful accomplishment of a program, mission, or test.  The authorization indicates that the information contained in this document levies the official user requirements for support of a given program.  It serves as an acceptance of the document by the support agencies in recognition of the requirements contained therein.
ITEM NO.:

Follow the preparation instructions for Format 1000.

PRECEDENCE RATING:
Enter the applicable precedence rating that is assigned to the program.

PRIORITY:
Enter the priority of the program, mission, or test.

INITIATION DATE:
Indicate the date when support is first required.  Dates for special facilities or unique instrumentation should be entered in REMARKS.

COMPLETION DATES:
Indicate the date when the program, mission, or test is planned to be completed or when it no longer requires support.

SPONSORING AGENCY:
Enter the military or government organization which has cognizance and prime responsibility for the program.

BASIC CONTRACT NO.:
Enter the basic contract number for the program, where applicable.

AUTHORITY (REFERENCES):
List the basic document which constitutes authority for conduct of the program.

REMARKS:
Enter the reason for security classification and special handling requirement.  List other contractors and their respective contract numbers when necessary.  Enter, if necessary, general information pertinent to the applicability and authorization of the document.

APPROVAL:
Use these entries for approval by the requesting agencies of the needs submitted.  Enter the name, rank (if applicable), title, agency, phone number, and date.  Leave space for signature.


**FORMAT 1020 - DISTRIBUTION LIST**

This format is used as a distribution list for this document and for both new issues and revisions.


ITEM NO.:

Follow the preparation instructions for Format 1000.

ORGANIZATION ADDRESS:
Enter the title of the organization, address (include post office zip code plus 4 digits), addressee's name and title, and applicable office symbol for each organization who wants a copy. Make additional entries as necessary to ensure distribution to the appropriate recipients.

NUMBER OF COPIES:
List the number of copies, original or revised, for distribution to each recipient.

## FORMAT 1030 - REVISION CONTROL AND CLASSIFICATION

This format is used as a means of revision control in an unclassified or classified document. Classified entries will not be included in the basic unclassified document. Appropriate referenced pages should be included in the basic unclassified document where the classified information would appear. The classified pages then appear in a classified addendum to the basic document. Care should be exercised to ensure that the complete title and other data does not render the collective pages classified under operational security (OPSEC) guidelines.

All revisions, both classified and unclassified, will require Format 1010 to show approval of the revisions.

ITEM NO.:
Follow the preparation instructions for Format 1000.

UDS SECTION:
List each UDS Section number used in the document.

ITEM:
For automated documentation systems indicate the item numbers within the sections.

PAGE:
For manual documentation systems, enter the page number for each section.

CLASS:
Enter the classification: TS - Top Secret, S - Secret, and C - Confidential required by the security guides beside each applicable section and its page number in this column.

REV:
Enter the revision number.  When preparing the original document, leave sufficient space vertically between the page numbers to enter additional pages that may be added by later revisions. Enter the revision number and the appropriate letter identifier.  "D" for delete, and the revision number (for example D1, D2, D3).
Opposite each page number, enter an "O" in the Rev. column to indicate the section on that page is an original.  When the document is revised, indicate  the sections and the corresponding pages that have been revised by deleting  the "O" and entering the symbol "R," followed by (if applicable) the revision  number.  If a section is deleted by the revision, the symbol "D" is entered.

DATE:
Enter the date of the section revision.


## FORMAT 1031 - INDEX

This format is used to present the index of sections used in the document (not used in PI/SC).  This list should be used as a checklist to ensure all pertinent information or requirements are documented.  Only those UDS sections which are applicable need be used.  The list is preprinted for reference, but when an "X" is entered opposite the section used, this format serves as an outline of contents for the document.

Enter an "X" opposite those UDS Section numbers used in the document.


## FORMAT 1040 -  SECURITY INFORMATION

This format is used to list the security classification of classified data/information pertaining to the program, mission, or test.  This format is used by the Project Office and not by the contractors.  It will serve as a security guide for the program for those that handle data, drawings, and equipment.

SECURITY GUIDES AND DOCUMENTS:
List the various security guides and documents used to establish the classification and to control the documentation of the information elements listed in the Program/Mission Elements entry.

CONFIRMATION - PROGRAM SECURITY MANAGER:
Enter the name and rank or title of the security advisor.  The security advisor will certify, by signature, the correctness of the security classification entered for each item listed in the Program/Mission Elements entry.

PROGRAM/MISSION ELEMENTS:
Identify program/mission information elements for which security classification is required.

SECURITY CLASSIFICATION:
Enter the security classification of the program/mission elements identified in the Program/Mission Elements entry. Designators used will be in accordance with instructions in the Program/Mission Elements entry.

The following security classification symbols will be used throughout the document:

| | | | |
|---|---|---|---|
| TS | TOP SECRET | C | CONFIDENTIAL |
| S | SECRET | U | UNCLASSIFIED |

Special Warning Designators

RD             RESTRICTED DATA

CNWDI        CRITICAL NUCLEAR WEAPON DESIGN INFORMATION

SAR           SPECIAL  ACCESS REQUIRED

ITEM:
This column includes a wide variety of items that may have a unique security classification.  Space is provided to add any other items not listed.

CLASSIFICATION:
Enter the appropriate classification (TS, S, C, U) and any special warning designators (RD, CNWDI).  For example, a particular reentry vehicle is classified SECRET-RESTRICTED DATA.  Enter S-RD in the column.  Had the reentry vehicle in this example been classified TOP SECRET-RESTRICTED DATA, the entry would have been TS-RD.

Items of a program which require "Encrypt for Transmission Only," to protect UNCLASSIFIED INFORMATION transmitted via electrical messages, will be indicated by placing the notation EFTO in the column.

DECLASSIFICATION INSTRUCTIONS:
Enter the appropriate downgrading declassification instructions (for example, Declassify 1998 - D98; Review 2004 - R04).

SECURITY CLASSIFICATION GUIDES:
List the various security classification guides and other source documents.

CONFIRMATION - PROGRAM SECURITY MANAGER:
Identify the security advisor and office confirming the information.

If required, this format is used to indicate the classification of various combinations of information and commonly used identifiers both before and after launch.  This format will only be used when combining bits of information change the level of security classification of the combination to a level higher than that of the highest bit in the combination.

EVENT:
The vertical columns and horizontal rows have the same event descriptions as shown in the events listing.  Enter the appropriate security classification for the combination of information indicated by the matrix.  Add additional events as required.

If the security classification for certain combinations of information changes with the occurrence of the launch, enter the appropriate classification before launch in the upper left and after launch in the lower right of the matrix.  Example, C/U.

If the classification changes after a launch, but only after a certain time period, note by a footnote symbol and explain in the REMARKS entry.  For example, C/U(1), (1) UNCLASSIFIED 30-days after launch, CONFIDENTIAL during interim period.

REMARKS:
Enter as appropriate.


## FORMAT 1041 - FACILITY CLEARANCE INFORMATION

This format is used by the requesting agency to list those nongovernment agencies who are entitled to receive classified range material, the clearance possessed by that agency, the agency that granted the clearance, and the degree of safeguarding ability that the nongovernment agency has.

ITEM NO.:
Follow the preparation instructions for Format 1000.

FACILITY:
Enter the full name of the nongovernment agency facility to whom the classified material is to be forwarded.

ADDRESS:
Enter the address of the agency involved.  Do not use a post office box number.

FACILITY CLEARANCE:
Enter the facility clearance and cage number of the nongovernment agency concerned.

GRANTING AGENCY:
Enter the name of the government agency granting the facility clearance, and the date the clearance was granted or last renewed.

SAFEGUARDING ABILITY:
Enter the degree of capability the agency has for storing and safeguarding classified material.


## FORMAT 1050 - ABBREVIATIONS/ACRONYMS

This format is used to define any word or abbreviation which, because of limited use or technical affiliation, may not be readily understood.

WORD/ABBREVIATION:
List the words, abbreviations, or acronyms used in the document.

DEFINITION:
Give the full definition or meaning as it applies to the subject for which the abbreviation or word is used.


## FORMAT 1051 - TEST CODE DEFINITION

This format is used to define the test codes that will be used throughout the document.  These test codes will identify the various test activities during the course of the program.  These test codes will be used as a method of correlating support requirements to the test activity involved such that any support requirement referenced to a test code indicates that this support will be required during the particular test program activity.

ITEM NO.:
Follow the preparation instructions for Format 1000.

TEST CODE:
Enter a test code letter (A, B, C...) for each portion of the test program which has similar support requirements.  This apportionment might separate test series, development phases of the program, time periods within the program, variations in equipment being used, or any other meaningful breakout of the program with regard to support requirements.  Double letters may be used to further break down the single-letter test code (such as AA, AB, AC..., within A).

TEST CODE DESCRIPTION:
Enter a short title to identify the test series or phase of the program to be conducted. Examples of test series, each of which might be assigned a separate test code, are launch, dry run, static firing, simulated flight, instrumentation test, and recoveries.

The test code could also be used to designate various time intervals or development phases of the program. Examples of these phases might be pad buildup, launch phase, or any other phase which would divide the program with regard to support requirements. Still another use of the test code would be to designate various types or groups of similar test series such as demonstration and shakedown operations or follow-on training launches. Different missions or series of missions that are covered in the same PRD/OR could thus be designated by different test codes.


## FORMAT 1052 - **SPECIAL CODE DEFINITION**

This format is used to define any special codes that will be used throughout the document such as item number supplemental definition, requestor, or supplier.

ITEM NO.:
Follow the preparation instructions for Format 1000.

ITEM NUMBER/SPECIAL CODE DEFINITION:
Enter an explanation of the basic elements, the method of constructing the code, and any code number-letter designators that are used in the document (see UDS Handbook, appendix A).


## FORMAT 1060 - **KEY TECHNICAL PERSONNEL**

This format is used to list the cognizant technical personnel who may be contacted regarding matters connected with the program or concerning information contained in the document.

ITEM NO.:
Follow the preparation instructions for Format 1000.

NAME/TITLE:
Enter last name, first name and middle initial. Provide military rank and branch of service, if applicable. Enter the person's title if applicable.

ORGANIZATION/ADDRESS:
Enter the organization and address of the person listed. Include complete zip code and e-mail address if applicable.

TELEPHONE:
Enter the complete telephone number including area code and extension, (include defense switching network [DSN] and commercial, if applicable), at the location specified for the office entry.

FACSIMILE:
Enter the complete facsimile communications number including telephone area code and extension, DSN, and FTS if applicable, of the facsimile equipment at the location specified for the KEY TECHNICAL PERSONNEL telephone entry.


## FORMAT 1070 - TECHNICAL REFERENCES

This format is used to list sources of supplemental information concerning the program or to provide additional background for  specific requirements listed on individual UDS sections and their corresponding pages of the document.  References cannot be used for the purpose of levying requirements, but they may be used to explain details that are too lengthy or complicated to be incorporated into the document.

UDS SECTION:
Indicate the UDS sections where the technical reference is used.

ITEM NO./PAGE:
List the item number of the requirement to which the reference pertains, if applicable. List the page numbers to which the reference pertains, if applicable.

TITLE:
Enter the title of the reference.

PUBLISHER/SOURCE:
Enter publisher and date of each referenced document and the organization and its complete address from which copies of the reference may be obtained.

CLASS:
Enter the security classification of each reference.


## FORMAT 1100 - PROGRAM DESCRIPTION

This format is used to provide a general description of the entire program.  Follow the preparation instructions for Format 1000.

INFORMATION:
Give a general description of the overall program.  A brief description of each test or category of tests may be included.  When a specific test or category of test may require unique support, the test should be described.


## FORMAT 1110 - **EXPERIMENTS DESCRIPTION**

This format is used to provide a general description of the various experiments assigned to the program.  Follow the preparation instructions for Format 1000.

INFORMATION:
Enter a general description of the experiments assigned to the overall program.  A brief description of each experiment or category of experiments may be included.  Identify the agency to which a particular experiment is assigned for support.  Include the type data resulting from each experiment such as tape, film, material samples, telemetry, flight log, and voice recordings.


## FORMAT 1120 - **SYSTEM FUNCTIONAL DESCRIPTION**

This format is used to provide the support agency with an insight into the basic philosophy which governs the system design, fabrication, test program, and ultimate use.  Follow the preparation instructions for Format 1000.

SUBSYSTEM AND MAJOR COMPONENT:
List the subsystems and major components of the final operational system.  These should correspond to the functional blocks illustrated in System Functional Block Diagram entry.

FUNCTIONAL CHARACTERISTICS:
Enter a brief description of functional characteristics of each major component and subsystem.

SYSTEM FUNCTIONAL BLOCK DIAGRAM:
Using block diagram methods, indicate the functional relationship between subsystems and major components of the complete operational weapon system.  Such items as the target, target acquisition unit, target data processor, guidance system, control mechanisms, and necessary support supplied may be considered as major functional components.  Also include and note items considered to be unusual.

**FORMAT 1130 - TEST DESCRIPTION**

This format is used to provide a detailed description of the mission or test.  Follow the preparation instructions for Format 1000.

INFORMATION:
Give a detailed description of the mission or test.  Each phase of the test and test objectives should be identified and described.


**FORMAT 1140 - TEST SCHEDULE**

This format is used to describe the schedule of the test series events or activities that will require support during the course of the test program or mission.  The scheduling (forecast) information will be used by the support agency to coordinate these activities with other test program activities on the range.  Follow the preparation instructions for Format 1000.

TEST SERIES:
Enter the title of principal test series or operations to be conducted.

RANGE HRS/TEST:
Enter the number of support hours required for each of the test events listed in Test Series entry.

NUMBER OF TESTS PER QUARTER:
Enter the last two digits of the applicable Calendar Year (CY) or Fiscal Year (FY) in the heading.  For each Test Series entry enter the planned number of tests per quarter.


**FORMAT 1300 - TEST VEHICLE SYSTEM INFORMATION**

This format is used to describe the entire test vehicle  system item/spacecraft/ payload to be tested.  Follow the preparation instructions for Format 1000.

INFORMATION:
Enter a brief description of the units to be tested.  Provide identification of each unit.

**FORMAT 1310 - TEST VEHICLE SYSTEM DESCRIPTIONS**

This format is used to show the external characteristics of the test vehicle system. Include such items as antenna locations, paint patterns, and camera targets. Side and top views are required. Follow the preparation instructions for Format 1000.

INFORMATION:
Provide a drawing of the test vehicle system item in the space provided, showing basic dimensions of length, station number of all field splices and separation planes, width, and body diameter. Special features should also be shown such as paint patterns, characteristic markings, and station number locations of antennas, stages, field splices and other pertinent components. All station numbers of the test vehicle system item must be referenced to a common point. In the top view of the test vehicle system item, show azimuth locations of all antennas from the top of the test vehicle system item measured from true north with the vehicle on the launch pad in the nominal launch position. If it is more desirable to increase the drawing scale, separate pages may be used for each view. Do not include locations that will be placed on a similar drawing on Format 1320.

**FORMAT 1311 - TEST VEHICLE SYSTEM CHARACTERISTICS**

This format is used to enter test vehicle system item characteristics. Units of measure must be identified. Use additional formats for each stage or module comprising the test vehicle system item. Follow the preparation instructions for Format 1000.

STAGE-MODULE NOMENCLATURE:
Identify the stage module.

PHYSICAL DIMENSIONS:
Enter the stage module dimensions as requested.

WEIGHTS:
Enter the weight data as requested. List the weight of the propellant or fuel. If the propellant is mixed on board prior to combustion, list the fuel and the oxidizer. Gases consist of all gases used for propulsion, control, and pressurization. Miscellaneous items are those too numerous to mention and those not covered in other listings in this entry. In burnout, list burnout weight per stage.

PROPULSION SYSTEM:
List type as liquid such as solid or nuclear. The specific impulse (Isp) value will be assumed at sea level (SL) unless otherwise noted in the applicable entry.

PROPELLANTS AND GASES:
Identify the type (name or designation) of propellants and gases used in each stage or phase.  List the propellant or fuel.  If the propellant is mixed prior to combustion, list the fuel and the oxidizer.  List the pressure of the larger quantity gaseous item and identify the item in each entry.

PERFORMANCE:
Enter the unit of measure that best fits the flight particulars.  Normally, range is in nautical miles, altitude is in feet, and velocity is in feet per second.  List the more applicable or appropriate time items per stage and identify, in the entry, each value used, that is, BO (Burnout), SEP (Separation), and IMP (Impact).

REMARKS:
Enter notes and pertinent operational characteristics or capabilities of the  system being tested.


## FORMAT 1320 - TEST VEHICLE SYSTEM ORDNANCE ITEMS DESCRIPTION

This format is used to describe test vehicle system item ordnance.  These data provide the support agency with knowledge of electrically initiated ordnance items and requesting agency's RF radiation sources.  Thus, precautions can be taken to prevent accidental ignition of electrically initiated ordnance items.  Reference any applicable technical documents, handbooks, notes, and prints on this format and describe them on Format 1070.  Follow the preparation instructions for Format 1000.

PURPOSE:
Enter the purpose of the device (that is, destruct, separation, ignition, or impact data).

TYPE/QUANTITY:
Enter the type and quantity of the device (for example, 2 squibs, 5 explosive bolts, or 2 solid propellants).

STAGE:
Enter the location of the device using the stage number.

MANUFACTURER'S PART NUMBER:
Enter the manufacturer and part number of each device and drawings if applicable.

**INSTALLATION:**
Enter the ordnance item installation information using the following two-letter code:

First Letter - Installation

    F - Factory               P - Pad               I - Industrial Area

Second Letter - Agency Doing Installation

    T - Test Agency         S - Support Agency

**LEADS:**
Enter "yes" if the device has external leads prior to installation.  Enter "no" if the device is a plug-in type with no external leads prior to installation.

**LEAD LENGTH:**
Enter "yes" if leads are shielded or "no" if leads are unshielded.  If both shielded and unshielded leads are used, enter "yes" and "no" on separate lines.  Enter lengths, as specified for the remaining lead length entries.  (Include unit of measure used.)

**CURRENT AMPS:**
Enter the maximum current (in amperes) which when passed through the device will fire no more than one device per thousand.  Enter the minimum current which is required to fire normally functioning devices of this type.  Enter the firing current to be used in this installation.

**BRIDGE:**
Enter the bridge material.  Use BW for bridge wire, EBW for exploding bridge wire, or C for carbon.  Enter the maximum and minimum impedance data.

**CLASS:**
Enter the Department of Transportation (DOT) class number of the ordnance item as described in the applicable ordnance safety manual used on the program.

**RF SAFE:**
Enter an "S" only when the ordnance device is safe for handling and installation in the radiation environment described in applicable regulations of the launch range.

**DRAWINGS:**
Enter any drawings that may be helpful in installation process.

**REMARKS:**
Enter any information that is related to the safe handling of devices and that may be helpful in the prevention of accidental firing.  Also, use this entry when additional space is needed to clarify any entry on this format.

**FORMAT 1330 - TEST VEHICLE SYSTEM FLAME PLASMA INFORMATION**

This format is used to describe test vehicle system item flame plasma model of the exhaust plume.  The data on this format will be employed by support agencies to evaluate the interference the exhaust plume produces with the propagation of electromagnetic signals to and from the test vehicle system item to determine the degree of coverage that can be provided by range instrumentation.  The flame plasma model will be used to compute attenuation and phase shift at various frequencies and for the aspect angles encountered in powered flight.  Follow the preparation instructions for Format 1000.

MODEL:  ELECTRON DENSITY ( ) COLLISION FREQUENCY ( ):
Both electron density and collision frequency contours are required for each stage.  Check which applies.

STAGE:
Enter the stage for which the model applies.  One model for each test vehicle system item stage is required.  For the first stage, the model should apply to the plume structure just prior to the beginning of tailoff (or separation, for test vehicle system item designed without tailoff).  For the second and higher stages, the model should apply to conditions at a time in the middle of the burning period.

ALTITUDE:
Enter the altitude or range of altitudes for which the model applies.

PLANE:  PITCH ( ) YAW ( ):
Enter the plane for which the model applies.  If applicable to both planes, check both pitch and yaw.

EXIT PLANE PARAMETERS:
Enter the average value of the exit plane electron density and exit plane collision frequency and indicate whether the values are experimental or theoretical.  For stages employing thrust vector control (TVC) by fluid injection, provide the electron density and collision frequency values for both TVC ON and TVC OFF.

FLAME PLASMA MODEL:
Draw contour lines of constant electron density for levels of 10 to the powers of 7, 8, 9, ..., up to the highest level that applies.  Also show contours of constant collision frequency (electron collision frequency for momentum transfer) up to the highest level that applies.  Each contour is to represent the locus of points for which the electron density (or collision frequency) has the value indicated.

The scale factor shall be indicated and should be suitably chosen for each stage so as to approximately fill the page for the $10^7$ contour.

The models should be derived from gas dynamic and chemical kinetic considerations. For multiple nozzles, an equivalent single nozzle may be used. Where available, experimentally determined values of exit plane electron and collision frequency, by means of the usual two-frequency attenuation method, are preferred.

Units of measure must be identified where applicable.

**FORMAT 1340 - TEST VEHICLE SYSTEM REENTRY PLASMA INFORMATION**

This format is used to provide a description of the vehicle reentry plasma effects. Follow the preparation instructions for Format 1000.

INFORMATION:
Enter a brief description of the vehicle reentry plasma. Provide a description of the effects reentry plasma will have on any of the applicable systems.

**FORMAT 1400 - TEST VEHICLE INSTRUMENTATION SYSTEMS**

This format is to be used to provide information of a general nature concerning instrumentation carried aboard the vehicle/test item/spacecraft/watercraft. Follow the preparation instructions for Format 1000.

INFORMATION:
Provide, as necessary, information of a general nature concerning onboard instrumentation not contained elsewhere in the document and which will aid the support agency in supporting the program/mission. Telemetry system attributes information will be provided in accordance with the latest edition of IRIG Standard 106, Telemetry Standards, chapter 9, Telemetry Attributes Transfer Standard (TMATS).

**FORMAT 1405 - TEST VEHICLE INSTRUMENTATION FREQUENCY SUMMARY**

This format is used to present a consolidated list of all frequencies which support requirements in the document. This list serves as a summary and is not to be considered as a request for frequency authorization. Requests for specific frequencies requiring protection also will be documented in Section 3420. Follow the preparation instructions for Format 1000.

FREQUENCY:
List the transmitted and received frequency and state units in measurements such as megahertz or kilohertz.

EMISSION CHARACTERISTICS:
List the type of emission (for instance, AM, FM, CW, or pulse...), bandwidth in kilohertz, and power output (average and peak) as the case may be.  Use current World Administrative Radio Conference (WARC) bandwidth and emission designators as required.

PURPOSE:
State the purpose for which the frequency is required:  air/ground voice, air/ground telemetry, point-to-point voice, or telemetry receivers.

GUARD BAND:
State the desired guard band.

TIME:
Enter the estimated agency time in hours per test that the frequency will be used.

LOCATION:
List location of the RF transmitter/receiver whose frequencies are listed in the frequency entry above.

REMARKS:
Enter any remarks that will further explain any of the previous entries.


## FORMAT 1410 - TEST VEHICLE METRIC SYSTEMS DESCRIPTION

This format is used to describe the operation of all test vehicle, system item, spacecraft, underwater, payload metric tracking systems.  Follow the preparation instructions for Format 1000.

INFORMATION:
Provide a general description of all test unit metric or underwater tracking systems including details of subsystems with their location and function.  Provide also an operational description to clarify the operation of each metric or underwater tracking system including system diagrams or drawings if applicable.

## FORMAT 1411 - TEST VEHICLE METRIC TRANSPONDER CHARACTERISTICS

This format is prepared by the requesting agency to provide the support agencies with the information to evaluate the compatibility of the test vehicle system item/ spacecraft/payload transponder, beacon or pinger system with range instrumentation. Separate Formats 1411 should be prepared for each transponder, beacon or pinger. Some of the entries on this format apply only to continuous wave transponders, radar beacons, or underwater acoustic tracking pingers and should be answered by "N/A" where necessary. Follow the preparation instructions for Format 1000.

GENERAL INFORMATION:
Enter the data required. Indicate measurement units where necessary.

REMARKS:
Enter any remarks that will further explain any of the previous entries.

TRANSMITTER CHARACTERISTICS:
Enter the data required. Indicate measurement units where necessary. Indicate calibration requirements and desired accuracies.

The information required by the entry, Spectrum Analysis Reports, is mandatory for certain support organizations and should be provided in accordance with applicable support agency specifications.

Transmitting systems which require extensive periods of RF checkout time will be required to be equipped with a closed-loop or non-radiating checkout device.

REMARKS:
Enter any remarks that will further explain any of the previous entries.

RECEIVER CHARACTERISTICS:
Enter the data required. Indicate measurement units where necessary.

REMARKS:
Enter any remarks that will further explain any of the previous entries.

ANTENNA CHARACTERISTICS:
Enter the information as specified. Antenna azimuth should be given from true north when the test unit is in a launch position.

Use Format 1412 and reference corresponding item identifiers to provide antenna and transmission system schematics.

If maximum gain (in dB) with respect to isotropic (dB) gain is greater than 12 dB, indicate main lobe beamwidth in elevation and azimuth at the 3-dB points in the Remarks.

The power delivered to antenna termination is the same as that of the transmitter power less the transmission system losses.

Check the applicable entry and submit antenna patterns in accordance with applicable directives of the support range.  Support agencies requiring antenna patterns in other formats should acquire the data through their normal channels.  Phasing networks and couplers associated with antenna arrays are considered part of the antenna system.  Losses in these elements should be included in the antenna pattern as inherent in the pattern measurement.

If separate antennas are used to transmit and to receive, submit two sets of format pages with the status of the Spectrum Analysis Report entry properly completed, one for each antenna system.

The information required by Transmitter and Antenna Characteristics, Spectrum Analysis Reports, and Antenna Patterns are mandatory for certain support organizations and should be provided in accordance with applicable support agency specifications.

REMARKS:
Enter any remarks that will further explain any of the previous entries.


## FORMAT 1412 - TEST VEHICLE METRIC ANTENNA SYSTEMS

This format is used to diagram the test vehicle system item/spacecraft/payload metric tracking antenna systems.  Follow the preparation instructions for Format 1000.

INFORMATION:
Provide a block diagram of the antenna system including module number, cable numbers, and schematic numbers, as applicable.  A cross-section drawing showing the test unit antenna location should be included.


## FORMAT 1415 - TEST VEHICLE GLOBAL POSITIONING SYSTEM (GPS) DESCRIPTION

This format is used to describe the operation of the test vehicle system item/spacecraft/payload GPS systems.  Follow the preparation instructions for Format 1000.

INFORMATION:

Provide the proposed or existing system functional design.  Indicate the location of the system by stage and module.


## FORMAT 1416 - TEST VEHICLE GPS ANTENNA SYSTEMS

This format is used to diagram the test vehicle system item/spacecraft/payload GPS tracking antenna systems.  Follow the preparation instructions for Format 1000.

INFORMATION:

Provide a block diagram of the antenna system including module number, cable numbers, and schematic numbers, as applicable.  A cross-section drawing showing the test unit antenna location should be included.


## FORMAT 1420 - TEST VEHICLE TELEMETRY SYSTEM DESCRIPTION

This format is used to describe the operation of the test vehicle system item/ spacecraft/payload telemetry systems.  Follow the preparation instructions for Format 1000.

INFORMATION:

Provide a general description of all test unit telemetry systems including details of subsystems with their location and function.  Provide also an operational description to clarify the operation of each telemetry system.  Telemetry system attributes information will be provided in accordance with the latest edition of IRIG Standard 106, Telemetry Standards, chapter 9, Telemetry Attributes Transfer Standard (TMATS).


## FORMAT 1421 - TEST VEHICLE TELEMETRY TRANSMITTER CHARACTERISTICS

This format is used by the support agency to evaluate the compatibility of the test vehicle system unit/spacecraft/payload telemetry systems with range instrumentation.  Use a separate Format 1421 for telemetry transmitting systems with different characteristics.  Five copies of the Spectrum Analysis Report and five copies of the Spectrum Response Report should be provided to the support agency, when available.  Quantitative data furnished on this format should be measured values after nominal warmup, where applicable.  The data source of unmeasured values, should be indicated by a footnote.  Follow the preparation instructions for Format 1000.

GENERAL INFORMATION:
Enter the data requested.  Include details on nonconformance to Range Commanders
Council (RCC) standards.

TRANSMITTER CHARACTERISTICS:
Enter the data requested to describe the transmitter characteristics listed on this
format down through the item entitled PCM Filtering Before Xmission.  The Spectrum
Analysis Report Number information requested is mandatory and should be provided
in accordance with the applicable support agency specifications.  The range periodically
publishes a list of equipment for which spectrum analysis requirements have been met.
If the model number of the transmitter is identical to one listed as satisfactorily
documented, the Spectrum Analysis Report Number information needs to be completed
as appropriate.

REMARKS:
Enter any clarifying remarks.

ANTENNA SYSTEM CHARACTERISTICS:
As an aid, refer to the UDS section/item number describing the circuits and component
description of the antenna system.  To complete the Form of Antenna Pattern Data entry,
submit antenna patterns in accordance with applicable directives of the support range.
Support agencies requiring antenna patterns in other formats should acquire the data
through their normal channels.  Phasing networks and couplers associated with antenna
arrays are considered part of the antenna system.  Losses in these elements should be
included in the antenna pattern as inherent in the pattern measurement.

REMARKS:  Enter any clarifying remarks.

If separate antennas are used to transmit and to receive, submit two format pages, one
format for each antenna system.

If a Spectrum Analysis Report is not available, the support agency may perform the
spectrum analysis.  Submit request to the support agency referencing the UDS
document containing this UDS format.

An RF Spectrum Analysis Report for a transmitter consists of such items as

- actual measurements of harmonic and spurious outputs including all signals
  greater than 60 dB down from the center frequency signal.  Frequencies to be
  investigated should be in the band from 0.15 to 10,000 megahertz per second.

- power output curves with respect to power and frequency.

- measured frequency stability in actual or simulated environments.

- any other measurements which would assist in assessing the interference generating capability while operating in the transmitter-receiver system. MIL-STD may be used as a guide for making these measurements.

REMARKS:
Enter any remarks that will further explain any of the previous entries.

LINK FREQUENCY (MHz):
Enter the link frequency in MHz.

PULSE CODE MODULATION (PCM) DATA:
For PCM fill in the appropriate values.

REMARKS:
Enter any clarifying remarks.


## FORMAT 1422 - TEST VEHICLE TELEMETRY ANTENNA SYSTEMS

This format is used to diagram the test vehicle system item/spacecraft/payload telemetry antenna system. Follow the preparation instructions for Format 1000.

INFORMATION:
Provide a block diagram of the test unit antenna system including module number, cable-numbers, and schematic numbers as applicable. A cross-section drawing showing the antenna location on the test unit should be included.


## FORMAT 1424 - TEST VEHICLE TELEMETRY ANALOG DESCRIPTION

This format is used to provide a listing of the continuous and commutated channels of the various telemetry links on the test vehicle system item/ spacecraft/payload. Follow the preparation instructions for Format 1000.

RCC ( )  NON-RCC ( ):
Check the appropriate box. If the characteristics vary from the RCC standards, describe the variations in REMARKS.

LINK:
Enter the link number, frequency, and modulation (that is, PM/FM, PDM/FM, PAM/FM).

CHANNEL:
Identify each channel by number.  Enter the subcarrier oscillator (SCO) frequency in kHz (if non-RCC).  List the deviation in kHz from the center frequency (if non-RCC) of the SCO.  Identify if the channel contains continuous information.

SEGMENTS AND RATE:
If the channel contains commutated data, enter the number of segments and sampling rate in the appropriate entry.  For example, 90 X 10 means 90 segments each sampled 10 times per second.  If the channel has a subcommutator or sub-subcommutator, enter the number of segments and sampling rate in the appropriate entry.

REMARKS:
Enter additional descriptive information as necessary.  If the channel is PAM, indicate if it is RTZ (Return-to-Zero) or NRZ (Non-Return-to-Zero).  Indicate sync information on sub and sub-subcommutated channels.


## FORMAT 1425 - TEST VEHICLE TELEMETRY DIGITAL FORMAT

This format is used to describe the encoding and data format of the test vehicle system item/spacecraft/payload digital telemetry systems.  Follow the preparation instructions for Format 1000.

INFORMATION:
Provide a description of word encoding and data format organization.  Include word structure, sampling rates, and sync word.  Provide pictorial representation of frame and subframe construction including channel identification.  Telemetry system attributes information will be provided in accordance with the latest edition of the IRIG Standard 106, Telemetry Standards, chapter 9, Telemetry  Attributes Transfer Standard (TMATS).


## FORMAT 1426 - TEST VEHICLE TELEMETRY DATA RECORDER CHARACTERISTICS

This format is used to describe the test vehicle system item/spacecraft/payload recorders and recorded data.  Follow the preparation instructions for Format 1000.

RCC ( )  NON-RCC ( ):
Place an "X" in the applicable space if RCC or NON-RCC.

GENERAL INFORMATION:
Enter the information required.  Include measurement units where necessary.

TRACK:

Identify the recorder track on which the data are recorded.

CHANNEL:
Identify the link/channel being recorded, if applicable.

SCO FREQUENCY:
If RCC, no entry required.  Otherwise, enter the information required.

INFORMATION BANDWIDTH:
If RCC, no entry required.  Otherwise, enter the information required.

FREQUENCY DEVIATION:
If RCC, no entry required.  Otherwise, enter the information required.

TYPE DATA:
Identify the type of data associated with each channel such as telemetry or voice.

REMARKS:
Enter additional information which may be required to describe the test unit recording system adequately.


## FORMAT 1430 - TEST VEHICLE COMMAND SYSTEM DESCRIPTION

This format is used to describe the operating of the test vehicle system item/ spacecraft/payload/underwater command systems.  Follow the preparation instructions for Format 1000.

INFORMATION:
Provide a general description of all test unit command systems including details of subsystems with their location and function.  Provide also an operational description to clarify the operation of each command system.  Denote the special command capability information for this program or mission.  Also, provide the proposed or existing system functional design.  Indicate the location of the systems by stage or module.


## FORMAT 1431 - TEST VEHICLE COMMAND SYSTEM CHARACTERISTICS

This format is prepared by the requesting agency to provide the support agencies with the information to evaluate the compatibility between ground up-data or destruct command systems and the test vehicle system item/underwater/spacecraft/ payload systems.  Follow the preparation instructions for Format 1000.

GENERAL INFORMATION:
Enter information as specified.

REMARKS:
Enter any information that will further explain any entries made.

RECEIVER CHARACTERISTICS:
Enter information as specified.  A signal pulse noise-to-noise ratio versus input signal in microvolts over a range of 1 to 100 microvolts is required by support agencies as are spectrum analysis reports of the receiver.

REMARKS:
Enter any information that will further explain any entries made.

ANTENNA CHARACTERISTICS:
Enter the information as specified.  Antenna azimuth should be given from true north when the test unit is in a launch position.

Use Format 1430 and reference appropriate item identifier to provide antenna and transmission system schematic.

If maximum gain is greater than 12 dB, indicate main lobe beamwidth in elevation and azimuth at the 3-dB points in REMARKS.  Check the applicable entry in Form of Antenna Pattern Submitted and submit antenna patterns in accordance with applicable directives of the support range.  Support agencies requiring antenna patterns in other formats should acquire the data through their normal channels.  Phasing networks and couplers associated with antenna arrays are considered part of the antenna system.  Losses in these elements should be included in the antenna pattern as inherent in the pattern measurement.

VERIFICATION SYSTEM:
Enter information as applicable and list the link identity (telemetry, PCM).

REMARKS:
Enter any information that will further explain any entries made.


**FORMAT 1432** - **TEST VEHICLE COMMAND SYSTEM ANTENNA SYSTEMS**

        This format is used to diagram the test vehicle system item/underwater/ spacecraft/payload command antenna systems.  Follow the preparation instructions for Format 1000.

INFORMATION:
Provide a block diagram of the antenna system including module number, cable numbers, and schematic numbers as applicable.  A cross-section drawing showing the antenna location on the test unit should be included.


## FORMAT 1440 - TEST VEHICLE VOICE COMMUNICATIONS OPERATING DESCRIPTION

This format is used to describe the operation of the vehicle system test item/ underwater/spacecraft/payload voice communications system.  Follow the preparation instructions for Format 1000.

INFORMATION:
Provide a general description of the test unit voice communications system.  Include block diagrams where necessary to ensure a comprehensive description.


## FORMAT 1441 - TEST VEHICLE VOICE COMMUNICATIONS CHARACTERISTICS

This format is prepared by the requesting agency to provide the support agencies with the information to evaluate the compatibility of the test vehicle system item/ underwater/spacecraft/payload communication system with the support agency equipment.  Follow the preparation instructions for Format 1000.

TRANSMITTER CHARACTERISTICS:
Enter the data required.  Include measurement units where necessary.

RECEIVER CHARACTERISTICS:
Enter the data required.  Include measurement units where necessary.

The information required in Spectrum Analysis Reports, antenna patterns, and measurements are mandatory for certain support organizations and should be provided in accordance with applicable support agency specifications.

ANTENNA CHARACTERISTICS:
Enter the data required.

If maximum gain is greater than 12 dB, indicate main lobe beamwidth in elevation and azimuth at the 3-dB points in REMARKS.

Entry "Power to Antenna-Termination (watts)" information is the same as that of the transmitter power less the transmission system losses.

Submit antenna patterns in accordance with applicable directives of the support range. Support agencies requiring antenna patterns in other formats should acquire the data through their normal channels.  Phasing networks and couplers associated with antenna arrays are considered part of the antenna system.  Losses in these elements should be included in the antenna pattern as inherent in the pattern measurement.  If separate antennas are used to transmit and to receive, submit two pages of this format, one for each antenna  system.

Use Format 1442 - Test Vehicle Voice Communications System Antenna Systems and reference appropriate item numbers for system schematic.

REMARKS:
Enter additional information such as operational mode and the use of equipment which may be helpful in describing the characteristics of this equipment.


## FORMAT 1442 - TEST VEHICLE VOICE COMMUNICATIONS ANTENNA SYSTEMS

This format is used to describe the test vehicle system item/underwater/ spacecraft/payload voice communications antenna systems.  Follow the preparation instructions for Format 1000.

INFORMATION:
Provide a block diagram of the antenna system including module number, cable numbers, and schematic numbers as applicable.  A cross-section drawing showing the antenna location on the test unit should be included.


## FORMAT 1460 - TEST VEHICLE TELEVISION OPERATING DESCRIPTION

This format is used to describe the test vehicle system item television systems. Follow the preparation instructions for Format 1000.

INFORMATION:
Provide a general description of the test vehicle system item television systems. Include an operating description detailing the function and location of each subsystem.


## FORMAT 1461 - TEST VEHICLE VIDEO CHARACTERISTICS

This format is prepared by the requesting agency to provide the support agencies with the information to evaluate the compatibility of the test vehicle system item video system with the network receivers.  Follow the preparation instructions for Format 1000.

GENERAL INFORMATION:
Make entries as applicable. Include measurement units where necessary.

TRANSMITTER CHARACTERISTICS:
Make entries as applicable. Include measurement units where necessary.

The information required in entries "Spectrum Analysis" and "Antenna Patterns" is mandatory for certain support organizations and should be provided in accordance with the applicable support agency specifications.

ANTENNA CHARACTERISTICS:
Make entries as applicable. If maximum gain is greater than 12 dB, indicate main lobe beamwidth in elevation and azimuth at the 3-dB points in REMARKS.

"RF Power Per Link into Antenna System Termination (watts)" information is the same as that of the Transmitter Power, less the Transmission System Losses.

Networks and couplers associated with antenna arrays which are part of the antenna losses should be included in the antenna pattern or be made inherent in the pattern measurement.

REMARKS:
Enter any clarifying remarks.

## FORMAT 1462 - TEST VEHICLE VIDEO ANTENNA SYSTEMS

This format is used to diagram the test vehicle system item video antenna systems. Follow the preparation instructions for Format 1000.

INFORMATION:
Provide a block diagram of the antenna systems including module number, cable numbers, and schematic numbers as applicable. A cross-section drawing showing the test vehicle system item antenna locations should be included.

## FORMAT 1463 - TEST VEHICLE VIDEO FORMAT DESCRIPTION

This format is used to describe the test vehicle system item video format. Follow the preparation instructions for Format 1000.

COMPOSITE WAVEFORM:
Illustrate a composite video signal showing maximum white and black amplitudes.
Include the following:

    (1)    horizontal sync
    (2)    one line of video
    (3)    horizontal and vertical sync
    (4)    one line of video and horizontal sync

SYNC FORMAT INFORMATION:
Provide the values for each item listed.

SECTION DETAIL - VERTICAL BLANK AND SYNC:
Illustrate the vertical sync signal and identify the time intervals.

SECTION DETAIL - HORIZONTAL BLANK AND SYNC:
Illustrate the horizontal sync signal and identify the time intervals.

SECTION DETAIL - LINE PERIOD:
Illustrate the line period of the Composite Waveform. Specify the time interval and the
relative amplitude of the video signal (white to black) to sync signal.

SECTION DETAIL - OTHER:
Use for additional illustrations or details as appropriate.

REMARKS:
Enter brief explanatory remarks as required.


## FORMAT 1470 - TEST VEHICLE RECOVERY AIDS DESCRIPTION

      This format is used to describe the test vehicle system item/underwater/
spacecraft/payload recovery location aids. Follow the preparation instructions for
Format 1000.

FLOTATION DURATION:
Enter flotation duration of the test unit to be recovered.

ELECTRONIC AIDS:
Enter the type of recovery aid (HF beacon transmitter, VHF recovery beacon, VHF
telemetry) and its characteristics. Enter when the recovery aid is activated (main chute
deployment, impact, after landing, continuous).

VISUAL AIDS:
Enter all visual aids (sea marker, flashing lights) and their characteristics.  Enter the time and method of activation of the visual aid (at impact, manually automatic).

REMARKS:
Enter additional information if required.


## FORMAT 1480 - OTHER TEST VEHICLE SYSTEMS

This format is used to provide technical information on other test vehicle system item/spacecraft/payload data acquisition equipment which has not been covered elsewhere in the document.  Follow the preparation instructions for Format 1000.

INFORMATION:
Enter the vehicle, stage, and module where the equipment is located.  Provide a brief technical description of the test unit equipment which requires support or which will aid in the support activities.


## FORMAT 1500 - CUSTOMER PROVIDED SUPPORT EQUIPMENT

This format is prepared by the requesting agency to provide the support agencies with a current listing of requesting agency equipment other than transmitters and receivers.  Include airborne, shipborne, and ground instrumentation equipment such as x ray or fluoroscopic equipment, optical tracking, or infrared measuring equipment, data converters, and computers that require support or that interface with support agency equipment.  Follow the preparation instructions for Format 1000.

INFORMATION:
List and briefly describe any instrumentation not listed elsewhere in the document that will be used during the program/mission and require support or interface with support agency equipment.


## FORMAT 1600 - SYSTEM READINESS TESTS

This format is used by the requesting agency to provide general information and requirements pertaining to the systems readiness/prelaunch tests.  Follow the preparation instructions for Format 1000.

INFORMATION:

Describe in a narrative manner, general test plans and requirements pertaining to the specific tests.  Charts, diagrams, and flow charts may be included where appropriate.

## FORMAT 1610 - READINESS TESTS IDENTIFICATION

This format is used to list the readiness/prelaunch tests and the associated identification number which are assigned to each test document.  Follow the preparation instructions for Format 1000.

TEST NAME:

List the titles of the readiness/prelaunch tests.  List the tests in the order the test requirements appear in the document, if appropriate.

NUMBER:

Enter the identification number assigned to each test document.

## FORMAT 1620 - READINESS TESTS SEQUENCE

This format is used to identify the sequence and nominal time of major events for each of the readiness/prelaunch tests.  Time, as specified, is nominal and subject to change.  Follow the preparation instructions for Format 1000.

TEST:

Enter the title of readiness/prelaunch test.

NOMINAL TIME:

Enter the nominal time that each major event is programmed, starting from a time reference that may be simulated lift off or simulated stage firing.  Time, as specified, is nominal and subject to change.

TIME DURATION:

Enter the time duration of the corresponding major events.

SUPPORT TIME:

Enter the amount of time that will be required in support of the corresponding major event.

MAJOR EVENTS:

List the major events that will be performed at the time listed (start transmission of test unit PCM telemetry, start test unit systems check).

REMARKS:

Enter special remarks with respect to the time, requirements, or support.

**FORMAT 1630 - CUSTOMER TEST COUNTDOWN**

This format is used to describe the relationship of the major milestones that occur during a countdown (pre-count, mid-count, and terminal-count). Included in this format should be only those items which affect the requirements in the remainder of the document.

The countdown contained in this format is a minimal countdown and is to be used for planning purposes only. For a detailed sequence of operations, the applicable test and checkout procedure should be consulted. Follow the preparation instructions for Format 1000.

TIME:
Enter in chronological order the times from T-0 when each operation is to be started and completed or when each service is to be rendered. An event that occurs 4 hours before T-0 will be shown as occurring at T-4 hours. The specific units of time must be included: d(days), h(hours), m(minutes), and s(seconds).

OPERATION OR SERVICE:
List the operations or services that will be performed at the time listed.

REMARKS:
Enter clarifying remarks if required.

**FORMAT 1700 - TRAJECTORY INFORMATION**

This format is used to establish a general test envelope in the early stages of the program. Follow the preparation instructions for Format 1000.

INFORMATION:
For the maximum, typical, and minimum trajectories, enter the known or probable values of the characteristics requested. The typical trajectory will be used in the bulk of flight testing and is not necessarily the average as concerns characteristics. Use the remaining entries to enter known or probable values of range, altitude, error probabilities, azimuth, and maximum performance (velocity). For test distribution, enter the percentage of total firings or test in which each different trajectory will be used.

**FORMAT 1710 - MAJOR MISSION EVENTS**

This format is used to provide trajectory parameters for each major mission event which occurs during the launch phase of the mission from lift-off through insertion (outboard engine cutoff, escape system jettison). Follow the preparation instructions for Format 1000.

SPHEROID:
Designate the spheroid used in deriving the trajectory parameters, and give the major axis and minor axis.

EVENT NO.:
Enter the event numbers sequentially beginning with number (1).

EVENT DESCRIPTION:
Describe the event for which the information is to be provided.

EVENT:
Enter the corresponding event number from above or abbreviated event description.

TIME:
Give the time referenced to lift off at which the event occurs.  If another time base is used, it must be defined in REMARKS.

FLIGHT PATH ANGLE:
Give the Earth-fixed flight path angle of the vehicle at the time specified.

VEL:
Give the Earth-fixed velocity of the vehicle at the time specified.  Enter in the heading the units used (feet/sec, meters/sec).

ALT:
Give the altitude of the vehicle at the time specified.  Enter in the heading the units used (feet, meters, kilometers).

GND RANGE:
Give the ground range from the vehicle point to the launcher at the time specified.  Enter in the heading the units used (feet, meters, nautical miles).

X:
Give the X coordinate of the vehicle at the time specified.  Enter in the heading the units used (feet, meters).

Y:
Give the Y coordinate of the vehicle at the time specified above.  Enter in the heading the units used (feet, meters).

Z:
Give the Z coordinate of the vehicle at the time specified.  Enter in the heading the units used (feet, meters).

COORDINATE SYSTEM:
Describe the coordinate system used to derive the coordinates provided previously. Include the location of the origin and the orientation of each axis.

REMARKS:
Enter any additional information required to clarify the data provided on the format.


## FORMAT 1720 - SPACE MANEUVER

This format is used to describe each event which results in changes to those orbital parameters which could affect acquisition of signal (AOS) and loss of signal (LOS) at subsequent ground station or where computer programs must account for the change in conditions. Follow the preparation instructions for Format 1000.

EVENT NUMBER:
Enter the corresponding event number as referenced on Format 1710.

TRAJECTORY PARAMETERS AT MANEUVER INITIATION:
Enter parameters planned at initiation of thrust period.

TRAJECTORY PARAMETERS AT MANEUVER CONCLUSION:
Enter parameters planned at conclusion of thrust period.

Inertial flight path angle entries are the angles between the initial velocity vector and the local horizontal plane, measured positive above the horizontal plane. The local horizontal plane is defined as a plane normal to the geocentric position vector. Inertial azimuth heading angle entries are the angles measured east of north to the projection of the initial velocity vector on the local horizontal plane.

MANEUVER THRUST PARAMETERS:
Enter the thrust parameters for the maneuver.

REMARKS:
Enter brief explanatory remarks as required.


## FORMAT 1730 - TRAJECTORY PLAN VIEWS

This format is used to provide a plan view of the trajectory of the test unit. Follow the preparation instructions for Format 1000.

INFORMATION:
Enter a plan view of the trajectory indicating the trajectory azimuth in degrees from true north. Provide impact point of various stages of the vehicle or test unit, as

appropriate, and a maximum probable dispersion pattern (Circular Error Probable (CEP)) for each impact point in accordance with applicable directives of the launching agency.  For orbital or space flights, show only the launch and terminal phases on one format page.  Use separate format pages to show the plan view for the planned orbital or space trajectory.

The most convenient scale may be used.


## FORMAT 1731 - TRAJECTORY PROFILE VIEWS

This format is used to show the profile view of the planned trajectories for powered, ascent, and terminal phases on Earth-curvature graphs.  Follow the preparation instructions for Format 1000.

INFORMATION:
Show the planned trajectory on scaled Earth-curvature graphs/illustrations.

The most convenient scale may be used.

Indicate altitude, burn-out locations, separation, and impact points as appropriate.  Suitable abbreviations may be used to identify the  various functions.  Enter any such abbreviations on Format 1050.


## FORMAT 1732 - LAUNCH TRAJECTORY

This format is used to plot the vehicle trajectory during the launch phase (booster or to first stage burnout).  In addition to the nominal trajectory, the maximum probable deviation as dispersion above and below the nominal will be plotted.

This format may also be used for describing complete trajectories for tests which cover a range of 1000 nautical miles or less.  Format 1731 must be used for longer range trajectories.  Follow the preparation instructions for Format 1000.

LAUNCH AZIMUTH:
Enter the initial launch azimuth.

FLIGHT AZIMUTH:
Enter the planned flight azimuth.

PLOTS:
The following plots are required on test vehicle performance or trajectories.

ALTITUDE VERSUS RANGE:
VELOCITY VERSUS TIME:
ALTITUDE VERSUS TIME:

The scales used must be identified on plots.  The most convenient scale may be used.


## FORMAT 1733 - ORBITAL AND SPACE TRAJECTORY

This format is used to illustrate the planned orbital and space trajectories.  Follow the preparation instructions for Format 1000.

SPACE PATH DIAGRAM - PLANNED TRAJECTORY:
Use appropriate Earth model.  Use the largest scale practicable, and indicate the earth scale used.

Enter orbiting vehicle trajectories to show the Earth orbit phase by placing the plane of the orbit or trajectory in the plane of the paper, indicating the location of the geographic poles.  Show apogee and perigee distances of orbit trajectories.  Also on the format show a side view of the Earth and the plane of the equator to indicate the plane of orbit, inclination of orbit to equatorial plane, and the geographic location of the poles.

Enter, as appropriate, space vehicle trajectories for Earth-Moon trajectories to indicate the Moon's position showing pertinent information such as lunar orbit injection point, impact point (if applicable), miss distance, lunar orbit, and landing site.  Omit as much of the midcourse as is desirable to provide enough space for all trajectory data.  Indicate the direction of the Sun at the intended time of injection.  For interplanetary trajectories, show the Earth, Sun, and target body positions at launch, and when the vehicle reaches its destination.  Indicate trajectory aphelion and perihelion.  Use additional formats as required.


## FORMAT 1734 - TERMINAL TRAJECTORY

This format is used to plot the vehicle (or nose cone, reentry body) trajectory during the terminal or reentry phase.  The reentry phase is generally considered to begin at approximately 300,000 feet.  The altitude scale does not need to exceed 300,000 feet unless special sequences or events occur prior to this phase.  Units of measure used must be identified.  Follow the preparation instructions for Format 1000.

FLIGHT AZIMUTH ON REENTRY (degrees true north):
Enter the flight azimuth of the reentry body from true north.

IMPACT POINT:
Enter the latitude and longitude of the impact point and the time of impact in seconds after T-0.

TARGET NUMBER REFERENCE:
Enter the appropriate unclassified target number reference point.

PLOTS:
The following plots are required:

ALTITUDE VERSUS RANGE:
VELOCITY VERSUS TIME:
ALTITUDE VERSUS TIME:

The scales must be identified on plots.  The most convenient scale may be used.


## FORMAT 1800 - OPERATIONAL SAFETY HAZARDS ISSUES

This format is used by the requesting agency to specify hazards that will be present during the test program.  This format is used for those items not applicable to Format 1810, Operational Safety Hazards Reports.  Follow the preparation instructions for Format 1000.

INFORMATION:
Define operational hazards not specified on Format 1810.


## FORMAT 1810 - OPERATIONAL SAFETY HAZARDS REPORTS

This format is used by the requesting agency as supplemental information for the Occupational Medical Program.  There are six reports which may be required; five are mandatory as indicated by an asterisk, and the sixth is required only when the requesting agency has experienced a health problem.  The intent of these reports is to obtain information about the hazards which will be present during the test program.  The material covered in each report may be limited to that which is considered hazardous by competent medical authority.  Include all applicable reports in accordance with existing public law and DOD directive (environmental).  Follow the preparation instructions for Format 1000.

REPORTS:

For every report, list by report name, date report supplied, or date report will be supplied.  Should a second report become necessary because of an appreciable change in the quantity of, or the addition of, a potentially hazardous material, an additional report bearing the identical title will be required.  Reports should be provided more than 90 days prior to the first launch in the test program.  Four copies of each report are required unless specified otherwise by the support agency.

*PROPELLANTS AND OTHER TOXIC OR HAZARDOUS MATERIALS:

In this mandatory report, list the chemical and physical properties and approximate quantity of each substance normally used in conjunction with testing which may involve toxic, poisonous, flammable, explosive, or which otherwise presents a hazard to humans, animals, fish, vegetation, and soil.  Include specific information of the effect on humans and the treatment, control, and preventive measures recommended.  List the recommended procedures to control any spill or escape of a potentially toxic or dangerous substance.  List manufacturer, trade name, and chemical ingredients.

*RADIATION HAZARDS:

In this mandatory report, list all sources of ionization or radio frequency radiation which may be a hazard to humans.  Include the type, amount, normal radiation level, and recommended control procedures.

*ACOUSTIC HAZARDS:

In this mandatory report, a noise spectrum report covering the range from 16 to 10,000 Hz is required for each equipment having a noise level in excess of 85 dB (vehicle engines, generator sets, air conditioners).

*BLAST PARAMETERS FOR 0.4 AND 0.65 PSI:

In this mandatory report, list the blast parameters of 0.4 and 0.65 psi, giving hazard radii and TNT equivalents that result from accidental or planned vehicle explosions.

*PROTECTIVE EQUIPMENT NEEDED:

In this mandatory report, furnish all information available on special (uncommon) protective clothing, equipment, and monitoring devices which are to be used during this test program.

HUMAN FACTORS ANALYSIS:

In this report, list any environmental and job related conditions that tend to adversely affect the health and efficiency of employees.

**FORMAT 2000 - TEST REQUIREMENTS/SUPPORT PLANS**

This format is used to present a narrative summary of the stated requirements in UDS.  The detailed instrumentation requirements will be entered in the appropriate instrumentation formats.  Follow the preparation instructions for Format 1000.

INFORMATION:
Enter a narrative summary of the support instrumentation systems requirements.


**FORMAT 2010 - SUPPORT PLAN SUMMARY**

This format is used by the support agency to provide a narrative description of the overall support planned to meet the program requirements.

ITEM NO.:
Follow preparation instructions for Format 1000.

REQUESTER:
Follow preparation instructions for Format 1000.

SUPPLIER:
Follow preparation instructions for Format 1000.

TEST CODE:
Follow preparation instructions for Format 1000.

LOCATION:
Follow preparation instructions for Format 1000.

INSTRUMENTATION/REQUIREMENT CATEGORY:
On a program level, give a brief narrative description of the support plan by instrumentation/requirement category (metric, telemetry, communications).

PLAN:
The support plan may be structured to include a brief description of the support corresponding to each UDS format of the PRD/OR document.


**FORMAT 2020 - SUPPORT REQUIREMENTS WHICH CANNOT BE MET**

This format is used by the support agency to itemize and explain any requirement items that cannot be supported as  stated in the PRD/OR. Follow preparation instructions for Format 1000.

UDS FORMAT NUMBER:
Enter the PRD/OR UDS format number where the requirement is identified.

ITEM NUMBER:
Enter the PRD/OR requirement item number where the requirement is identified.

REVISION NUMBER:
Enter the PRD/OR UDS document revision number where the requirement is identified.

RESPONSE:
Explain why the requirement item cannot be met.  Where appropriate, state best results or tolerances, obtainable with existing equipment.


## FORMAT 2030 - ENGINEERING PLAN

This format is used by the support agency to present a plan that will adequately support the requirement item which cannot be met by the use of additional equipment/facilities.  Follow preparation instructions for Section 1000.

REFERENCE PSP FORMAT NUMBER:
Enter the PSP format number to which the engineering plan responds.

REFERENCE PSP ITEM NUMBER:
Enter the PSP item number to which the engineering plan responds.

RESPONSE:
Describe the support that can be provided to satisfy adequately the requirement item which cannot be met.  This plan should include the latest state-of-the-art equipment/ facilities to meet or exceed the support necessary to satisfy the program requirement item.


## FORMAT 2040 - FUNDING INFORMATION

This format is used by the support agency to provide funding information estimates for the support of the overall program.  Follow preparation instructions for Format 1000.

RESPONSE:
State the agency that will provide the funds.  Indicate costs, time scale, and any other information that will support the funding information.  Indicate the UDS format/item number from the PRD/OR for which additional funds are required for equipment/ facilities necessary to satisfy the requirement.

**FORMAT 2050 - IMPLEMENTATION SCHEDULE**

This format is used by the support agency to indicate the schedule for the installation, checkout, and operational turnover of additional equipment/facilities for the support of certain requirements delineated in the PRD/OR. Follow preparation instructions for Format 1000.

PRD/OR REFERENCE FORMAT/ITEM NUMBER:
Indicate reference to specific requirement in PRD/OR.

STATION DESIGNATION:
List the station designation along with the station call letters.

DATES:
Enter the calendar year (CY) and indicate the start and completion dates for satisfying the requirement item.

**FORMAT 2060 - CUSTOMER RESPONSIBILITIES**

This format is used by the support agency to identify specific requirement item support which requires action on part of the requesting agency before a total support commitment can be made. Follow preparation instructions for Format 1000.

PRD/OR FORMAT NUMBER:
Enter the PRD/OR format number requiring the action.

PRD/OR ITEM NUMBER:
Enter the PRD/OR item number requiring the action.

RESPONSE:
Provide a narrative discussion of the action required by the requesting agency.

**FORMAT 2070 - FLIGHT SAFETY OPERATIONAL CONCEPTS**

This format is completed by the support agency when appropriate. The information presented does not respond to requirement items in the requirement documents. Follow preparation instructions for Format 1000.

INFORMATION:
Present a narrative description of the flight safety operational concepts of the support agency that pertain to the program or test.

## FORMAT 2080 - RANGE DERIVED REQUIREMENTS

This format is used by the support agency to present pertinent range derived requirements.  A derived requirement is any item of support required by one agency from another agency to meet the first agency's responsibility.  It does not include direct support of a requesting agency requirement item.  Follow preparation instructions for Format 1000.

DERIVED REQUIREMENT:
Enter the derivative requirement that is pertinent to the program or test.


## FORMAT 2100 - METRIC DATA

This format is used to list general information relating to metric tracking data requirements and should contain a narrative description of such data.  Follow the preparation instructions for Format 1000.

REQUIREMENT ( )  INFORMATION ( ):
Indicate whether each item number submitted is a requirement for support from the support agency or is submitted for informational purposes only.  Include a brief narrative description of metric tracking instrumentation data requirements.  Describe the general metric tracking information and requirements applicable to, but not covered by, the other formats of this section.  Following are types of general metric tracking information and requirements to be shown:

Data Definitions

    Coordinate system and point of origin desired.

    Physical quantities required and attitude definition.

    Corrections to physical quantities and instructions.

    Units and linear measurements of range and flight test data.

    Basic systems parameters.

Instrumentation and Operating Support Instructions

    Recorder Requirements

    Recorder Instructions

    Calibration Standards and Methods

Include the accuracy and priority of metric data that is required.

## FORMAT 2110 - **METRIC DATA - LAUNCH**

This format is used to specify the launch data requirements.  The launch phase is normally from lift-off until booster or first stage burnout.  Follow the preparation instructions for Format 1000.

DATA REQUIRED:
Enter the name of the data requested in the following order:  position (X, Y, Z), velocity, acceleration, and attitude.  If attitude (roll, pitch, yaw) data are not similar, identify each requirement separately.  Repeat, in the order above, the data requirements if different for each test-series category or flight.  Also, identify any unique data parameters desired other than the ones listed.  Identify the coordinate systems in which the data are required.

MISSION INTERVAL (RANGE, ALTITUDE, TIME):
Enter the range, altitude, time interval, or function during which coverage is required. Separate the interval into the smallest increments necessary to properly cover the various accuracies required (0 - 50 miles, 50 - 1500 miles).

For orbital phase and beyond, indicate vehicle position by appropriate coordinates.  Use REMARKS if additional space is required to define the intervals.

Where appropriate for further clarity, include the geographic location or desired site.

DATA POINTS/SECOND:
Enter the minimum number of data points which should be read or tabulated during data reduction (1, 2, 4, 10, 1/10 sec).

DATA PRIORITY:
Indicate whether the data requirement is Mandatory (M), Required (R), or Desired (D).

DATA ACCURACY:
Indicate the required data accuracy value such as ± 5 ft or ± 2 percent.

REAL TIME RELAY:
State whether information is needed in voice or digital form and to what point it is to be relayed.

REMARKS:
Enter any remarks necessary to clarify entries made.

All metric data are normally recorded with timing.  It is not necessary to state metric timing requirements or that data required are versus time unless a specific or unique timing signal or rate is required.


## FORMAT 2111 - **METRIC DATA - MIDCOURSE**

This format is used to specify the midcourse data requirements.  The midcourse phase is normally from booster or first stage burnout to start of terminal or reentry phase for ballistic or probe launches.  If the launch is an orbital launch, the midcourse phase normally begins at booster or first stage burnout and terminates at injection.  Follow the preparation instructions for Format 1000.

DATA REQUIRED:
Enter the name of the data requested in the following order:  position (X, Y, Z), velocity, acceleration, and attitude.  If attitude (roll, pitch, yaw) data are not similar, identify each requirement separately.  Repeat, in the order above, the data requirements if different for each test series category or flight.  Also, identify any unique data parameters desired other than the ones listed.  Identify the coordinate systems in which the data are required.

MISSION INTERVAL (RANGE, ALTITUDE, TIME):
Enter the range, altitude, time interval, or function during which coverage is required.  Separate the interval into the smallest increments necessary to properly cover the various accuracies required (0 - 50 miles, 50 - 1500 miles).

Indicate vehicle position by appropriate coordinates.  Use REMARKS if additional space is required to define the intervals.

Where appropriate for further clarity, include the geographic location or desired site.

DATA POINTS/SECOND:
Enter the minimum number of data points which should be read or tabulated during data reduction (1, 2, 4, 10, 1/10 sec).

DATA PRIORITY:
Indicate whether the data requirement is Mandatory (M), Required (R), or Desired (D).

DATA ACCURACY:
Indicate the required data accuracy value such as $\pm 5$ ft or $\pm 2$ percent.

REAL TIME RELAY:
State whether information is needed in voice or digital form and to what point it is to be relayed.

REMARKS:
Enter any remarks necessary to clarify entries made.

All metric data are normally recorded with timing. It is not necessary to state metric timing requirements or that data required are versus time unless a specific or unique timing signal or rate is required.


## FORMAT 2112 - METRIC DATA - ORBITAL AND SPACE

This format is used to specify orbital and space metric data requirements. The orbital phase starts at injection (midcourse terminates at injection when the vehicle attains orbital velocity). Enter data requirements in the same sequence they occur such as those for the first parking orbit, restart and powered flight, coast period in one orbit, and other phases in space. Follow the preparation instructions for Format 1000.

DATA REQUIRED:
Enter the name of the data requested in the following order: position (X, Y, Z), velocity, acceleration, and attitude. If attitude (roll, pitch, yaw) data are not similar, identify each requirement separately. Repeat, in the order above, the data requirements if different for each test series category or flight. Also, identify any unique data parameters desired other than the ones listed. Identify the coordinate systems in which the data are required.

MISSION INTERVAL (RANGE, ALTITUDE, TIME):
Enter the range, altitude, time interval, or function during which coverage is required. Separate the interval into the smallest increments necessary to properly cover the various accuracies required (0 - 50 miles, 50 - 1500 miles).

Indicate vehicle position by appropriate coordinates. Use REMARKS if additional space is required to define the intervals.

Where appropriate for further clarity, include the geographic location or desired site.

DATA POINTS/SECOND:
Enter the minimum number of data points which should be read or tabulated during data reduction (1, 2, 4, 10, 1/10 sec).

DATA PRIORITY:
Indicate whether the data requirement is Mandatory (M), Required (R), or Desired (D).

DATA ACCURACY:
Indicate the required data accuracy value such as ± 5 ft or ± 2 percent.

REAL TIME RELAY:
State whether information is needed in voice or digital form and to what point it is to be relayed.

REMARKS:  Enter any remarks necessary to clarify entries made.

All metric data are normally recorded with timing.  It is not necessary to state metric timing requirements or that data required are versus time unless a specific or unique timing signal or rate is required.


## FORMAT 2113 - METRIC DATA - TERMINAL

This format is used to specify the terminal or reentry metric data requirements. The reentry phase begins at approximately 300,000 feet altitude unless specific functions occur prior to this altitude that will require range support.  Terminal phase normally begins for an aircraft or ordnance when on the final trajectory to a designated target/recovery area.  Follow the preparation instructions for Format 1000.

DATA REQUIRED:
Enter the name of the data requested in the following order:  position (X, Y, Z), velocity, acceleration, and attitude.  If attitude (roll, pitch, yaw) data are not similar, identify each requirement separately.  Repeat, in the order above, the data requirements if different for each test series category or flight.  Also, identify any unique data parameters desired other than the ones listed.  Identify the coordinate systems in which the data are required.

MISSION INTERVAL (RANGE, ALTITUDE, TIME):
Enter the range, altitude, time interval, or function during which coverage is required. Separate the interval into the smallest increments necessary to properly cover the various accuracies required (0 - 50 miles, 50 - 1500 miles).

Indicate vehicle position by appropriate coordinates.  Use REMARKS if additional space is required to define the intervals.

Where appropriate for further clarity, include the geographic location or desired site.

DATA POINTS/SECOND:
Enter the minimum number of data points which should be read or tabulated during data reduction (1, 2, 4, 10, 1/10 sec).

DATA PRIORITY:
Indicate whether the data requirement is Mandatory (M), Required (R), or Desired (D).

DATA ACCURACY:
Indicate the required data accuracy value such as $\pm 5$ ft or $\pm 2$ percent.

REAL TIME RELAY:
State whether information is needed in voice or digital form and to what point it is to be relayed.

REMARKS:
Enter any remarks necessary to clarify entries made.

All metric data are normally recorded with timing.  It is not necessary to state metric timing requirements or that data required are versus time unless a specific or unique timing signal or rate is required.


## FORMAT 2120 - METRIC DATA - OTHER

This format is used to specify other metric data requirements not easily covered in Formats 2110, 2111, 2112, 2114, and 2115.  Follow the preparation instructions for Format 1000.

DATA REQUIRED:
Enter the name of the data requested in the following order:  position (X, Y, Z), velocity, acceleration, and attitude.  If attitude (roll, pitch, yaw) data are not similar, identify each requirement separately.  Repeat, in the order above, the data requirements if different for each test series category or flight.  Also, identify any unique data parameters desired other than the ones listed.  Identify the coordinate systems in which the data are required.

MISSION INTERVAL (RANGE, ALTITUDE, TIME):
Enter the range, altitude, time interval, or function during which coverage is required. Separate the interval into the smallest increments necessary to properly cover the various accuracies required (0 - 50 miles, 50 - 1500 miles).

Indicate vehicle position by appropriate coordinates.  Use REMARKS if additional space is required to define the intervals.

Where appropriate for further clarity, include the geographic location or desired site.

DATA POINTS/SECOND:
Enter the minimum number of data points which should be read, tabulated, etc., during data reduction (1, 2, 4, 10, 1/10 sec).

DATA PRIORITY:
Indicate whether the data requirement is Mandatory (M), Required (R), or Desired (D).

DATA ACCURACY:
Indicate the required data accuracy value such as $\pm 5$ ft or $\pm 2$ percent.

REAL TIME RELAY:
State whether information is needed in voice or digital form and to what point it is to be relayed.

REMARKS:
Enter any remarks necessary to clarify entries made.

All metric data are normally recorded with timing. It is not necessary to state metric timing requirements or that data required are versus time unless a specific or unique timing signal or rate is required.


## FORMAT 2130 - METRIC DATA NETWORK COVERAGE

This format is used to illustrate the metric tracking coverage which is desired during all phases. Follow the preparation instructions for Format 1000.

REQUIREMENT:
Provide a diagram that depicts the vehicle tracking during flight, recommended tracking station location, and desired coverage from each station. Identify the phases of the tracking coverage required.


## FORMAT 2140 - METRIC DATA COVERAGE

This format is used to identify the optical and electronic instrumentation systems being used. In addition, it will provide information as to location, coverage time, usage, and the phases covered by the metric instrumentation system being used. In the matrix, show the relationship between the stations and the system by entering an appropriate code in the proper location. Follow the preparation instructions for Format 1000.

TEST UNIT/STAGE:
Enter the test unit/stage involved.

SYSTEM:
In the vertical column opposite SYSTEM, enter the associated metric tracking system class (MIPIR, FPS-16).

SUBITEM:
Enter an appropriate sequential number or identification as a subset suffix to the main item number.

STATION:
Enter the station name and code of the system in the space provided.

COVERAGE INTERVAL:
Enter the time interval for the support to be provided.

REMARKS:
Use this entry to explain all codes or designators assigned to the entries on this format.


## FORMAT 2150 - **GPS DATA**

This format is used for listing GPS metric data requirements.  Follow the preparation instructions for Format 1000.

MISSION INTERVAL (RANGE, ALTITUDE, TIME):
Enter the range, altitude, or time interval or function during which coverage is required (0 to 800 feet, T-4 sec to T+10 sec, separation).


## FORMAT 2200 - **TELEMETRY DATA**

This format is used to list general information and instructions relating to telemetry data requirements such as recommended recording practices and calibration standards and methods.  Telemetry system attributes information will be provided in accordance with the latest edition of IRIG Standard 106, Telemetry Standards, chapter 9, Telemetry Attributes Transfer Standard (TMATS).  Follow the preparation instructions for Format 1000.

REQUIREMENT ( )  INFORMATION ( ):
Indicate whether each item number submitted is a requirement for support from the support agency or is submitted for informational purposes only.  Include a brief description of telemetry ground support instrumentation data requirements applicable

to, but not covered by, the other formats of this section.  Typical general telemetry instructions and requirements to be listed are

• Special Recording Instructions and Techniques

• Instrumentation and Operating Support Instructions

    - Calibration Standards and Methods

    - Operators' Log (Data Sheet) Requirements

• Accuracy and priority of telemetry data required

## FORMAT 2210 - TELEMETRY RECORDING INTERVAL

This format is used to describe the telemetry events to be recorded and the type and interval required.  The information in this format will conform to Range Commanders Council (RCC) standards unless otherwise stated.  Follow the preparation instructions for Format 1000.

MEASURED EVENT:
Enter the assigned measurement number and name.

LINK (MHZ) TYPE:
Enter the RF link frequency megahertz of each link to be used.  This frequency is later used to identify the link (such as Link 2225.5).  Enter below the frequency, the type of modulation (FM/FM, PDM/FM, PAM/FM, PCM).

TELEMETRY CHANNEL:
Identify the telemetry link channel number of assigned code number associated with the event to be recorded.

RECORDING INTERVAL:
Enter time (minutes), position (feet, nautical miles) or flight phase interval or period during which telemetry recordings or coverage will be required.

MEASURE RATE RPS/BPS:
Enter the measuring (commutation or repetition) rate.  For commutated channels, list the revolutions per second (RPS) (2.5, 5, 10, 20, 30).  Enter "CONT" for continuous (noncommutated) channels.  For each PCM link, list the bit rate in bits per second (bps) such as 40k, 60k, 300k, 400k, 600k, 800k (k=1000).

REQUIRED IN REAL TIME:
Identify the data required in real time (performed during the actual flight or test of the test vehicle).

RECORDING:
TAPE:  Magnetic tapes
PEN:   Pen recordings
OSCILLOGRAPH: Oscillograph recordings

CONSOLE PRESENTATION:
Enter real time console presentations of specific test (velocity, temperature, sequential events).

COMPUTATIONS:
Define the computations required.

DATA PRIORITY:
Indicate whether the data requirement is mandatory (M), required (R), or desired (D).

DATA ACCURACY:
Indicate the required reduced data accuracy value (±, %, or parts per  million).

REMARKS:
Enter any remarks necessary to clarify entries made.


## FORMAT 2220 - TELEMETRY STRIP CHART RECORDING FORMAT

This format is used by requesting agency to list analog telemetry recording requirements.  Follow the preparation instructions for Format 1000.

TRACE NUMBER:
Indicate the trace number sequentially from the left side of the recorder.  Show unused traces if applicable.

MEASUREMENT:
Identify the assigned measurement name and number.

LINK:
Identify the telemetry link to be associated with each measurement to be recorded. Give frequency or other acceptable designation.

CHANNEL:
Identify the telemetry link channel associated with each measurement to be recorded.

SEGMENT:
Identify the telemetry link channel segment associated with each measurement to be recorded.

ACCURACY:
List the deflection and calibration requirements that may be needed.

RECORDER IDENTIFICATION AND SPEED:
Identify the recorder by station or facility or other unique identification; also indicate recording speed in inches per second (ips) or millimeters per second (mm/s).

REMARKS:
Enter any remarks necessary to clarify entries made.


## FORMAT 2221 - TELEMETRY EVENT RECORDING FORMAT

This format is used by requesting agency to list telemetry event recording requirements. Follow the preparation instructions for Format 1000.

STATION RECORDER NUMBER:
Identify the station event recorder to be used (1, 2, 3).

SPEED:
Indicate the recording speed in inches per second (ips) or millimeters per second (mm/s).

TRACE NUMBER:
Indicate the trace number sequentially from the left side of recorder. Show unused traces if applicable.

MEASUREMENT IDENTIFICATION NUMBER:
Indicate the identification number of the event to be recorded.

EVENT:
List the name of event to be recorded.

LINK (MHZ):
Identify the telemetry link in megahertz associated with measurement to be recorded.

TELEMETRY CHANNEL:
Identify the telemetry link channel associated with each event to be recorded.

BIT NUMBER:

Indicate the bit number containing the event to be recorded.

SAMPLE RATE:
Indicate sample rate in samples per second (SPS).

REMARKS:
Enter any remarks necessary to clarify entries made.


## FORMAT 2230 - TELEMETRY DECOMMUTATION PROCESSING SPECIFICATIONS

This format is used to outline telemetry decommutation requirements in the areas of cathode ray tube (CRT) presentations, line printer displays, analog digitizing, and data compression.  Follow the preparation instructions for Format 1000.

DATA DESCRIPTION:
Enter the type of data to be processed.

DATA SECURITY CLASSIFICATION:
Enter the security classification of the data being processed.

PROCESSING TIME:
Enter the time (Zulu or flight time) to begin (FROM) and stop (TO) processing.

DATA SAMPLE RATE:
Enter the rate at which the data should be sampled and stored on analog magnetic tape.

DATA COMPRESSION TYPE:
Enter the type of data compression to be performed on the data (fixed  limits, floating limits, pass, mask) if applicable.

CRT UPDATE RATE:
Enter the rate at which the data/measurement value should be updated (5/sec, 15/sec).

LINE PRINTER RATE:
Enter the rate at which the data/measurement value should be updated (5/sec, 15/sec).

DATA PLOT RATE:
Enter the rate at which the data should be taken from the sampled data and  plotted or printed.

DATA FORMAT/GENERAL INSTRUCTIONS:

Enter all special data formats for general instructions which are needed to further define the specifications of the processed data.


## FORMAT 2240 - **TELEMETRY COVERAGE**

This format is used to summarize the telemetry coverage required.  In addition, it will provide information as to location, coverage time, link frequency, and the phases covered by the telemetry systems.  Show the relationship between the stations and the telemetry link by entering an appropriate code in the proper location.  Follow the preparation instructions for Format 1000.

TEST UNIT/STAGE:
Enter the test unit/stage involved.  When more than one is involved, provide vertical separation for the entries.

FREQUENCY:
Enter the frequency in MHz in the vertical column opposite FREQUENCY.

LINK:
Enter the number designator of the telemetry link in the vertical column opposite LINK.

SUBITEM:  Enter an appropriate sequential number or identification as a subset suffix to the main item number.

COVERAGE INTERVAL:
Enter the time interval for the support to be provided.

STATION:
Enter the station name or designator and code of the system in the space provided.

REMARKS:  Use this entry to explain all codes or designators assigned to the entries on this format.


## FORMAT 2300 - **COMMAND SYSTEMS**

This format is used to define general command requirements.  Follow the preparation instructions for Format 1000.

REQUIREMENT ( )  INFORMATION ( ):
Indicate whether each item number submitted is a requirement for support from the support agency or is submitted for informational purposes only.  Define general command requirements including accuracy and priority of command data.


## FORMAT 2310 - **COMMAND CONTROL**

This format is used by the requesting agency to list functions to be accomplished using the command control system.  Follow the preparation instructions for Format 1000.

COMMAND FUNCTION:
List the name of the function to be performed.

TIME:
Give the time the function is to be performed.  If the time listed in this entry is nominal, explain in PURPOSE AND REMARKS/SPECIAL INSTRUCTIONS the method of arriving at the actual time.

FUNCTION CODE:
Give the code which must be transmitted to perform the function.

PURPOSE AND REMARKS/SPECIAL INSTRUCTIONS:
Use this entry to explain the purpose of the requirement.  Also, use this space for any remarks or special instructions which would be informative to those who must plan the support.


## FORMAT 2320 - **COMMAND DESTRUCT**

This format is used only by organizations which have destruct responsibility.  Requirements levied against other agencies are to be entered on this format.  Follow the preparation instructions for Format 1000.

REQUIREMENT:
Enter each requirement which must be supported to evaluate situations relevant to the command destruct function and to carry out this responsibility.


## FORMAT 2330 - **COMMAND UP LINK**

This format is used to describe the command up link data requirements.  Follow the preparation instructions for Format 1000.

REQUIREMENT:
Enter each requirement which must be supported to evaluate situations relevant to the command up-link data function and to carry out this responsibility.


## FORMAT 2331 - COMMAND UP LINK RECORDINGS

This format is used to describe the recording requirements for the command up-link data system.  Follow the preparation instructions for Format 1000.

REQUIREMENT:
Provide a description of the support requirements for the command up-link data recording system during the various mission phases.


## FORMAT 2332 - COMMAND UP LINK STATIONS COVERAGE

This format is used to present the coverage of the command systems being used.  In addition, it will provide information as to location, coverage time, usage, and the phases covered by the command system.  Show the relationship between the station/frequency and the test unit/stage/data type/modulation by entering the appropriate designators in the proper locations.  Follow the preparation instructions for Format 1000.

TEST UNIT/STAGE:
Enter the test unit/stage involved.

LINK:
Enter the number designator of the telemetry link in the vertical column opposite LINK.

FREQUENCY:
Enter the frequency in MHz for the column in the vertical column opposite FREQUENCY.

SUBITEM:
Enter an appropriate sequential number or identification as a subset suffix to the main item number.

COVERAGE INTERVAL:
Enter the time interval for the support to be provided.

STATION:
Enter the station name and code of the system in the space provided.

MODULATION:
Enter the RF and keying modulation information (PM/FM, FM/FSK).

DATA TYPE:
Enter the type of data (command or destruct).

REMARKS:
Enter any remarks necessary to clarify entries made.


## FORMAT 2400 - TIMING

This format is used by the requesting agency to list its requirements for timing. Follow the preparation instructions for Format 1000.

TIMING SIGNAL:
List the RCC standard format designator (letter plus numbers) for each timing signal required.  Refer to RCC documents 200-95, <u>IRIG Serial Time Code Formats</u>, 205-87, <u>IRIG Standard Parallel Binary and Parallel Binary Coded Decimal Time Code Formats</u>, and 212-94, <u>IRIG J Asynchronous ASCII Time Code Formats</u>.  Timing signals and required pulse repetition rate not listed in the RCC documents should be entered and described in REMARKS.

REMARKS:
Enter any remarks necessary to clarify entries made.


## FORMAT 2410 - TIMING SIGNAL DETAIL

This format is used by the requesting agency to list its requirements for timing. Follow the preparation instructions for Format 1000.

TIMING SIGNAL:
List the RCC standard format designator (letter plus numbers) for each timing signal required.  Refer to RCC documents 200-95, <u>IRIG Serial Time Code Formats,</u> 205-87, <u>IRIG Standard Parallel Binary and Parallel Binary Coded Decimal Time Code Formats</u>, and 212-94, <u>IRIG J Asynchronous ASCII Time Code Formats</u>).  Timing signals not listed in the RCC documents, as well as required pulse repetition rate, should be entered and described in REMARKS.  List the correlation accuracy or tolerance limits in milliseconds or microseconds.  Special requirements as to tolerable jitter may be listed in REMARKS. The synchronization of all timing signals with the master generator should be requested from the support agency receiving the document.

LOCATION OF END INSTRUMENT:
Enter the name or symbol of the station/site, center, base, vehicle/van, and if known, the building number, the room number, and the rack number (title or name) and any other information to assist the range in determining where the service is required.

SIGNAL REQUIRED:
List type of timing signal required (RCC designator or other standard designator).

WHEN REQUIRED:
List the duration or the requirement, start and stop dates and times, and whether intermittent or continuous.

END EQUIPMENT:
Specify general or make/model of end device to which required timing signal will be connected, input impedance, balanced or single-ended input, and required voltage. List the number of devices required at each location. Describe any unusual conditions imposed on timing end equipment such as size/weight limitation or accessibility restrictions.

TIME CORRELATION:
State the relationship between the required timing signal referenced to some external time (GPS, range time, master station timing, vehicle time, or Universal Coordinated Time (UTC).

ENVIRONMENT:
Indicate the maximum ambient temperature, pressure/altitude, humidity, vibration or other condition to be imposed on timing terminal/end equipment at each of the locations where the equipment will be operating.

REMARKS:
Enter any remarks necessary to clarify entries made.


**FORMAT 2411 - PULSE RATES**

This format is used by the requesting agency to list its requirements for pulse rates at each location, end equipment, or recording/display device. Follow the preparation instructions for Format 1000.

TIMING SIGNAL:
List the RCC standard format letter designator for the timing signal repetition rates required. (Refer to RCC document 200-95, IRIG Serial Time Code Formats.) Signals not listed should be noted as such in REMARKS.

LOCATION OF END INSTRUMENT:
Enter the name or symbol of the station/site, center, base, vehicle/van and if known, the building number, the room number, and the rack number (title or name) and any other information to assist the range in determining where the service is required.

RATES REQUIRED:
List in terms of pulses per second (pps), thousands of pulses per second (kpps), pulses per minute (ppm), or pulses per hour (pph).

REMARKS:
Enter any remarks necessary to clarify entries made.


## FORMAT 2412 - TIMING SEQUENCER REQUIREMENTS

This format is used by the requesting agency to list requirement for automatic sequential control. Follow the preparation instructions for Format 1000.

EVENTS:
List those functions which are sequences for control by the automatic function control circuits. Each automatic function control circuit is capable of automatically initiating or terminating an external function at a predetermined time during the countdown. The time of either initiation or termination is determined by the path panel program. Enter the functions to be controlled in chronological order based on start times (for example, start gyro, stop LOX topping, start spin rockets, or start recorder).

List the functions preselected for sampling by the automatic hold-fire control circuits. Each automatic hold fire circuit provided is capable of sampling the off or on condition of an external function. The sampling time of these circuits is determined by preselecting the sampling interval on the patch panel. Each circuit has an automatic/manual control. In the automatic condition, if the malfunction of an external circuit clears during the sampling time, countdown will automatically restart. In the manual condition, the countdown can be restarted only by the sequence start button. Enter the functions to be sampled. These functions should be incorporated into the chronological order (based on start times) which were generated by the list of automatic function control circuits.

SIGNAL SEQUENCE:
Enter the time in hours (h), minutes (m), and seconds (s) with respect to T-0 that the functions listed in EVENTS are initiated.

ELECTRICAL CHARACTERISTICS:
Enter the quantity of make or break contacts that will occur at the time listed above, and enter the letter "M" or "B" to indicate a make or break condition. If the electrical characteristics differ for each make or break contact, enter each on a separate line.

Enter the excitation voltage, current rating, and type of signal in these entries as required.

REMARKS:
Enter any remarks necessary to clarify entries made.


## FORMAT 2413 - VISUAL COUNTDOWN

This format is used by the requesting agency to list its requirements for visual countdown.  Carefully plan the entries on this format so all requirements can be clearly and completely displayed in the proper sequence of entries.  Follow the preparation instructions for Format 1000.

INFORMATION TO BE DISPLAYED:
State the information to be displayed such as countdown information range or sequencer count, sequence status information, Range Safety Officer hold fire, master hold, Superintendent of Range Operations proceed, SRO hold fire, and other function and status items.

OPERATION PERIOD:
Enter the start (FROM), stop (TO), and total time to the nearest minute and second (or tenth of a second, if applicable).

INDICATORS:
Enter the number of indicators required to display the information and enter the type of mounting for panel-mounted or bulkhead-mounted.

LOCATION OF VISUAL INDICATORS:
State the location of the indicator as closely as possible.  The station entry can include name or symbols of stations participating in the operation.

REMARKS:
Enter any remarks necessary to clarify entries made.


## FORMAT 2414 - STATUS INDICATORS

This format is used by the requesting agency to list its requirements for status indicators.  Carefully plan the entries on this format so that all requirements can be clearly and completely displayed in the proper sequence of entries.  Follow the preparation instructions for Format 1000.

INFORMATION TO BE DISPLAYED:
State the information to be displayed such as countdown information range or sequencer count, sequence status information, Range Safety Officer hold fire, master hold, Superintendent of Range Operations proceed, SRO hold fire, and other function and status items.

OPERATION PERIOD:
Enter the start (FROM), stop (TO), and total time to the nearest minute and second (or tenth of a second, if applicable).

INDICATORS:
Enter the number of indicators required to display the information and enter the type of mounting for panel-mounted or bulkhead-mounted.

LOCATION OF VISUAL INDICATORS:
State the location of the indicator as closely as possible.  The station entry can include name or symbols of stations participating in the operation.

REMARKS:
Enter any remarks necessary to clarify entries made.


**FORMAT 2415 - TIMING SYNCHRONIZATION**

This format is used by the requesting agency to list requirement for timing synchronization.  Follow the preparation instructions for Format 1000.

EVENTS:
List those functions which are sequences for control by the automatic function control circuits.  Each automatic function control circuit is capable of automatically initiating or terminating an external function at a predetermined time during the countdown.  The time of either initiation or termination is determined by the path panel program.  Enter the functions to be controlled, in chronological order, based on start times (for example, start gyro, stop LOX topping, start spin rockets, or start recorder).

SIGNAL SEQUENCE:
Enter the time in hours (h), minutes (m), and seconds (s) with respect to T-0 that the functions listed in EVENTS are initiated.

ELECTRICAL CHARACTERISTICS:
Enter the quantity of make or break contacts that will occur at the time listed above, and enter the letter "M" or "B" to indicate a make or break condition.  If the electrical characteristics differ for each make or break contact, enter each on a separate line.  Enter the excitation voltage, current rating, and type of signal in these entries as required.

REMARKS:
Enter any remarks necessary to clarify entries made.


## FORMAT 2600 - OTHER SYSTEMS

This format is used to define systems required other than those specified in other UDS formats.  Follow the preparation instructions for Format 1000.

REQUIREMENT ( )  INFORMATION ( ):
Indicate whether each item number submitted is a requirement from the support agency or is submitted for informational purposes only.  Define the requirements for systems not specified elsewhere in the document.  Include support instrumentation required, data required, and coverage.  Detailed requirements are specified on Formats 2610, 2620, 2630, 2640, and 2650.


## FORMAT 2610 - OTHER SYSTEMS - DIRECTED ENERGY

This format is used to list and identify laser or other directed energy systems requirements.  Follow the preparation instructions for Format 1000.

REQUIREMENT:
Enter a narrative description of the directed energy system requirement.  Systems information should include

    type emitter (CW, pulse)
    pulse width (sec)
    power (Peak Pulse) (watts)
    pulse rate (sec)
    half angle divergence (radians)
    point of contact (message, letter)

Enter the specific location or area where the equipment is to be installed or used.

REMARKS:
Enter any remarks necessary to clarify entries made.


## FORMAT 2620 - OTHER SYSTEMS - SUPPORT INSTRUMENTATION

This format is used to list special requirements for support instrumentation equipment which cannot be covered elsewhere in the document.  Follow the preparation instructions for Format 1000.

RA ( )  SA ( ):
State whether equipment is to be supplied by the requesting agency or by the  support agency.

NAME/TYPE:
Enter the name and type of equipment required.

MANUFACTURER:
List the manufacturer and model number if the requirement demands a specific system or piece of equipment.

LOCATION:
Enter the specific location or area where the equipment is to be installed or used.

PURPOSE/REMARKS:
State the purpose for which the equipment is required.  Enter remarks which will clarify the requirement.


## FORMAT 2630 - OTHER SYSTEMS - ENVIRONMENTAL

This format is used to state any environmental data requirements.  Follow the preparation instructions for Format 1000.

REQUIREMENT:
Enter any environmental data requirements.  State the various conditions of interval (range, altitude, time) data points or accuracy required.  Include a statement of purpose for the data and any remarks or clarifying instructions.  Include the accuracy and priority of the data required.


## FORMAT 2640 - OTHER SYSTEMS - DATA

This format is used to state any data requirements which do not conveniently fit or have not been covered.  Follow the preparation instructions for Format 1000.

REQUIREMENT:
Enter any data requirements which have not been covered in other UDS formats. State the various conditions of interval (range, altitude, time) data points, or accuracy required.  Include a statement of purpose for the data and any remarks or clarifying instructions.  Include the accuracy and priority of the data required.

**FORMAT 2650 - OTHER SYSTEMS - COVERAGE**

This format is used to identify coverage for other test unit systems not covered elsewhere in the document.  Follow the preparation instructions for Format 1000.

TIME (GET) OR TIME PERIOD:
Enter the Ground Elapsed Time (GET) or time period during which the coverage is to be provided.

GEOGRAPHICAL LOCATION OR RECOMMENDED SITE:
Enter the recommended geographic or site locations for the coverage to be provided.

COVERAGE:
Indicate the frequency and number or systems that will be provided to communicate with the composite system of the vehicle.

REMARKS:
Enter any remarks necessary to clarify entries made.


**FORMAT 2700 - COMMUNICATIONS**

This format is used to describe in a general way the interstation communication requirements.  Follow the preparation instructions for Format 1000.

REQUIREMENT ( )  INFORMATION ( )
Indicate whether each item number submitted is a requirement from the support agency or is submitted for informational purposes only.  Generally describe each interstation ground communications link giving the purpose for which it is to be used (type of communication (voice, teletype, facsimile, data)).  Include any comments which have an effect on overall network provisioning.


**FORMAT 2710- AIR/GROUND VOICE COMMUNICATIONS**

This format is used to specify the general air/ground voice communication requirements.  Follow the preparation instructions for Format 1000.

REQUIREMENT ( )  INFORMATION ( ):
Indicate whether each item number submitted is a requirement from the support agency or is submitted for informational purposes only.  Summarize requirements which must be supported to provide effective air/ground voice communications.

## FORMAT 2711 - **AIR/GROUND VOICE COVERAGE**

This format is used to identify the voice communication equipment/systems for air/ground communications that will be used.  In addition, it will provide information as to location, coverage time, and the phases covered by the system.  Follow the preparation instructions for Format 1000.

SYSTEM:
List the recommended system which supplied the coverage described below.

TIME (GET) OR TIME PERIOD:
Enter the Ground Elapsed Time (GET) or time period for which coverage is provided.

RECOMMENDED SITE OR LOCATION:
Enter recommended geographic or site locations for the provided coverage.

REMARKS:
Enter any remarks necessary to clarify entries made.


## FORMAT 2712 - **AIR/GROUND VOICE RECORDINGS**

This format is used to levy requirements for recording radio, television, telephone, and other types of communications.  Follow the preparation instructions for Format 1000.

SUBITEM:
Enter an appropriate sequential number or identification as a subset suffix to the main item number.

TEST CODE:
Enter the applicable test code for each subitem.

STATION OR LOCATION:
Indicate the station or location that will record the communication data.

RECORDING REQUIREMENTS:
List the data to be recorded, the method of recording, and any special recording format.

AUDIO/VIDEO RECORDING:
Enter the time the recording is to be initiated (START) such as T-0, Acquisition of Signal (AOS); the time the recording is to be terminated (STOP) such as T-350 sec, Loss of Signal (LOS); enter the type of recording, audio (A), video (V), or both (AV); and enter the recording speed (SPED) in inches per second or millimeters per second.  Indicate

units and state the REEL SIZE limitations of the playback equipment (3 in, 5 in, 7 in, 10-1/2 in).

TIME CORL (TIME CORRELATION):
Enter Yes or No to indicate whether or not time correlation is required on the recording.

REMARKS:
List any special instructions or remarks to clarify the recording requirements.  If more space is required use a reference subitem number and explain.


## FORMAT 2720 - COMMUNICATIONS DETAIL

This format is used to state requirements for all ground communications except longline, telephone and recording requirements.  Separate formats will be used for the following types of requested communications:

| | |
|---|---|
| teletype | public address |
| voice | voice radio |
| television/data | other |
| facsimile | |

Follow the preparation instructions for Format 1000.

USE:  ADMINISTRATIVE ( )  OPERATIONAL( ):
Indicate the type, administrative or operations, for which service is requested.

TYPE OF SERVICE:
Enter the type of communications requested and the service desired such as voice-transmission, voice-continuous wave, television/data transmission, public address, and paging.  Include the technical characteristics of the signal to be transmitted.

QUANTITY:
Enter the number of circuits required.

LOCATION OF OPERATING TERMINALS:

SUBITEM:
Enter an appropriate sequential number (.1 or .2) as a subset suffix to the main item number.

CIRCUIT NAME/TYPE:
Identify the circuit name and type.

LOCATION:
Indicate the originating location of the circuit followed below by the terminating location(s).

BLDG/ROOM:
Indicate the building and room number of the originating ciruit followed by  the building and room numbers (if known) at the terminating locations.

CIRCUIT NO.:
Identify the circuit numbers at the originating and termination locations.

NOTE NO.:
Use this entry to numerically code (1, 2) references to notes placed on the format to clarify entries made.


## FORMAT 2730 - **VOICE NETWORK TRANSMISSION**

This format is used to outline longline communications requirements for voice transmission requirements which have been specified elsewhere.  Longlines are geographically separated circuits that require leasing negotiations with an appropriate communications carrier.  Follow the preparation instructions for Format 1000.

This format, when completed, is a matrix which shows the relationship between stations and circuit descriptions for communications circuit requirements.  Any abbreviations, designators, or special notes peculiar to this matrix may be entered on a separate page using a UDS GEN format.  The subsequent pages will then reflect the instructions which are below.

CIRCUIT DESCRIPTION:
Enter the circuit type and use in the columns.  Circuit types may be simplex, duplex, half-duplex, or other.  Circuit uses may be voice, voice/data, air-to-ground, tracking coordination, telemetry coordination, command coordination, operational administration, meteorology, biomedical, recovery, or other.

In the last column, enter the total number of circuits.

SUBITEM:
This number may be single digit or decimal coded and is a suffix to the item number.

STATION:
Enter the sites or centers from where the information originates.  Enter the sites or centers to where the information is going.  If the information flow is in both directions (duplex) either site may be entered.  Use standard site letter designators.
TOTAL CIRCUITS:

Enter the total number of circuits needed to satisfy all the requirements within the line items.

REMARKS:
Enter remarks that will further clarify responses in this format.


## FORMAT 2731 - SECURE VOICE NETWORK TRANSMISSION

This format is used to outline longline communications requirements for secure voice transmission requirements which have been specified elsewhere.  Longlines are geographically separated circuits and require leasing negotiations with an appropriate communications carrier.  Follow the preparation instructions for Format 1000.

This format, when completed, is a matrix which shows the relationship between stations and circuit descriptions for communications circuit requirements.  Any abbreviations, designators, or special notes peculiar to this matrix may be entered on a separate page using a UDS GEN format.  The subsequent pages will then reflect the instructions below.

CIRCUIT DESCRIPTION:
Enter the circuit type and use in the columns.  Circuit types may be simplex, duplex, half-duplex, or other.  Circuit uses may be voice, voice/data, air-to-ground, tracking coordination, telemetry coordination, command coordination, operational administration, meteorology, biomedical, recovery, or other.

In the last column, enter the total number of circuits.

SUBITEM:
This number may be single digit or decimal coded and is a suffix to the item number.

STATION:
Enter the sites or centers from where the information originates.  Enter the sites or centers to where the information is going.  If the information flow is in both directions (duplex) either site may be entered.  Use standard site letter designators.

TOTAL CIRCUITS:
Enter the total number of circuits needed to satisfy all the requirements within the line items.

REMARKS:
Enter remarks that will further clarify requirements in this format.


## FORMAT 2732 - TELETYPE NETWORK TRANSMISSION

This format is used to outline longline communications for teletype transmission requirements which have been specified elsewhere.  Longlines are geographically separated circuits that require leasing negotiations with an appropriate communications carrier.  Follow the preparation instructions for Format 1000.

This format, when completed, is a matrix which shows the relationship between stations and circuit descriptions for communications circuit requirements.  Any abbreviations, designators, or special notes peculiar to this matrix may be entered on a separate page.  The subsequent pages will then reflect the instructions below.

CIRCUIT DESCRIPTION:
Enter the circuit type and use in the columns.  Circuit types may be simplex, duplex, half-duplex, or other.  Circuit uses may be voice, voice/data, air-to-ground, tracking coordination, telemetry coordination, command coordination, operational administration, meteorology, biomedical, recovery, or other.

In the last column, enter the total number of circuits.

SUBITEM:
This number may be single digit or decimal coded and is a suffix to the item number.

STATION:
Enter the sites or centers from where the information originates.  Enter the sites or centers to where the information is going.  If the information flow is in both directions (duplex) either site may be entered.  Use standard site letter designators.

TOTAL CIRCUITS:
Enter the total number of circuits needed to satisfy all the requirements within the line items.

REMARKS:
Enter remarks that will further clarify requirements in this format.


**FORMAT 2733 - SECURE DATA NETWORK TRANSMISSION**

This format is used to outline longline communications for secure data transmission requirements which have been specified elsewhere.  Follow the preparation instructions for Format 1000.  Longlines are geographically separated circuits that require leasing negotiations with an appropriate communications carrier.

This format, when completed, is a matrix which shows the relationship between stations and circuit descriptions for communications circuit requirements.

Any abbreviations, designators, or special notes peculiar to this matrix may be entered on a separate page.  The subsequent pages will then reflect the instructions which are below.  Follow the preparation instructions for Format 1000.

CIRCUIT DESCRIPTION:
Enter the circuit type and use in the columns.  Circuit types may be simplex, duplex, half-duplex, or other.  Circuit uses may be voice, voice/data, air-to-ground, tracking coordination, telemetry coordination, command coordination, operational administration, meteorology, biomedical, recovery, or other.

DATA DESCRIPTION:
List only those not obvious (analog, digital, data rates).  Other - Specify in entry or in REMARKS.

SUBITEM:
This number may be single digit or decimal coded and is a suffix to the item  number.

STATION:
Enter the sites or centers from where the information originates.  Enter the sites or centers to where the information is going.  If the information flow is in both directions (duplex) either site may be entered.  Use standard site letter designators.

TOTAL CIRCUITS:
Enter the total number of circuits needed to satisfy all the requirements within the line items.

REMARKS:
Enter any remarks in this entry that will further clarify any requirements that appear on this format.


## FORMAT 2734 - VIDEO/DATA NETWORK TRANSMISSION

This format is used to outline longline communications for television/data transmission requirements which have been specified elsewhere.  Follow the preparation instructions for Format 1000.  Longlines are considered as those circuits geographically separated so that they require leasing negotiations with the telephone company or appropriate communications carrier and include video teleconferencing (VTC) services.

This format, when completed, is a matrix which shows the relationship between stations and circuit descriptions for communications circuit requirements.

Any abbreviations, designators, or special notes peculiar to this matrix may be entered on a separate page using a UDS GEN R format.  The subsequent pages will then reflect the instructions which are below.

CIRCUIT DESCRIPTION:
Enter the circuit type and use in the columns.  Circuit types may be simplex, duplex, half-duplex, or other.  Circuit uses may be voice, voice/data, air-to-ground, tracking coordination, telemetry coordination, command coordination, operational administration, meteorology, biomedical, recovery, or other.

DATA DESCRIPTION:
List only those not obvious (analog, digital, data rates).  Other - Specify in entry or in REMARKS.

SUBITEM:
This number may be single digit or decimal coded and is a suffix to the item number.

STATION:
Enter the sites or centers from where the information originates.  Enter the sites or centers to where the information is going.  If the information flow is in both directions (duplex) either site may be entered.  Use standard site letter designators.

TOTAL CIRCUITS:
Enter the total number of circuits needed to satisfy all the requirements within the line items.

REMARKS:
Enter any remarks in this entry that will further clarify any requirements that appear on this format.


## FORMAT 2735 - FACSIMILE NETWORK TRANSMISSION

This format is used to outline longline communications for facsimile transmission requirements which have been specified elsewhere.  Follow the preparation instructions for Format 1000.

Longlines are considered as those circuits geographically separated so that they require leasing negotiations with the telephone company or appropriate communications carrier.

This format, when completed, is a matrix which shows the relationship between stations and circuit descriptions for communications circuit requirements.

Any abbreviations, designators, or special notes peculiar to this matrix may be entered on a separate page.  The subsequent pages will then reflect the instructions which are below.

CIRCUIT DESCRIPTION:
Enter the circuit type and use in the columns.  Circuit types may be simplex, duplex, half-duplex, or other.  Circuit uses may be voice, voice/data, air-to-ground, tracking coordination, telemetry coordination, command coordination, operational administration, meteorology, biomedical, recovery, or other.

SUBITEM:
This number may be single digit or decimal coded and is a suffix to the item number.

STATION:
Enter the sites or centers from where the information originates.  Enter the sites or centers to where the information is going.  If the information flow is in both directions (duplex) either site may be entered.  Use standard site letter designators.

TOTAL CIRCUITS:
Enter the total number of circuits needed to satisfy all the requirements within the line items.

REMARKS:
Enter remarks that will further clarify requirements in this format.


## FORMAT 2740 - INTERCOMMUNICATIONS SYSTEMS

This format is used to state requirements for distribution within the operational intercommunication systems.  It is the connections required between the local area and the various sites normally satisfied by operational intercommunications system (OIS) and transistorized operations phone system (TOPS) type systems.  Follow the preparation instructions for Format 1000.

NET TITLE OR NUMBER:
Enter the net title, number, or function of the system.  Place the title, number, or function in a vertical position in the space provided.  If notes are required to clarify the entries, enter a reference letter under the relevant net and explain in the REMARKS.  Do not use the letters M or X as reference letters.  BOX A -  If notes are required to clarify the net title or number entries, enter a reference letter in Box B under the relevant net and explain in REMARKS.

SUBITEM:
This number may be a single digit or decimal coded and is a suffix to the item number.

TYPE INST (TYPE INSTRUMENTATION):
Indicate the end instrument type desired.  Use the following symbols:

    S - Standard        W - Weather        SP - Special Purpose     E - Explosion Proof

STATION OR LOCATION:
Identify the location or station where the end instrument will be installed.  BOX B - If notes are required to clarify the station or location entries, enter the reference letters in the column entries below Box B and explain in REMARKS.  Do not use the letters M or X as reference letters.  Using a matrix, show the relationship between this station and the net title or number by placing an X in the appropriate boxes.  If only a monitor capability of a net function is required, place an M in the appropriate boxes.  If notes are required to clarify the relation between the nets and the station or location entries, enter a reference letter in the appropriate place in lieu of the X or M.  Explain the letter used in REMARKS.

REMARKS:
Use this space to explain all letter designations assigned to the entries in this format.


## FORMAT 2750 - **VOICE TERMINATIONS**

      This format is used to state requirements for voice communications except longline telephone and recording requirements.  Either this format or Format 2720 may be used depending on the type of presentation desired.  Follow the preparation instructions for Format 1000.

CIRCUIT TITLE:
All circuits must be identified by their proper, official title to facilitate implementation and access control.  If desired, the common name or abbreviation may be entered in parentheses after the proper title.  If used, enter circuit numbers, call signs, or bit rates.

RESPONSIBLE AGENCY:
Enter the name of the responsible agency involved in the circuit termination.

SUBITEM:
This number may be single digit or decimal coded and is a suffix to the item number.

TEST CODE:
Enter the applicable test code for each subitem.

NOTE:
If notes are required to clarify the entries, enter a reference number and explain in a note.

CAP (CAPABILITY):
Enter one of the following communications circuit capability symbols opposite each item:

| | |
|---|---|
| T | Talk and monitor (headset only) |
| T w/M/S | Monitor with speaker |
| T/S | Talk and monitor with headset and speaker |
| M | Monitor with headset only |

TERMINATION LOCATIONS:
Show the terminations sequentially in each location under the responsible agency. Each termination should have a subitem number, test code, and an entry to show the capability. To complete the circuit between agencies, an entry should be made for each location. Entries are used for information only when the termination is the customer's responsibility.

## FORMAT 2751 - SECURE VOICE TERMINATIONS

This format is used to state requirements for secure voice communications except longline telephone and recording requirements. Either this format or Format 2720 may be used depending on the type of presentation desired. Follow the preparation instructions for Format 1000.

CIRCUIT TITLE:
All circuits must be identified by their proper, official title to facilitate implementation and access control. If desired, the common name or abbreviation may be entered in parentheses after the proper title. Circuit numbers, call signs, or bit rates, if they are to be used, are to be entered.

RESPONSIBLE AGENCY:
Enter the name of the responsible agency involved in the circuit termination.

SUBITEM:
This number may be single digit or decimal coded and is a suffix to the item number.

TEST CODE:
Enter the applicable test code for each subitem.

NOTE:

If notes are required to clarify the entries, enter a reference number with the note.

CAP (CAPABILITY):

Enter one of the following communications circuit capability symbols opposite each item:

    T               Talk and monitor (headset only)

    T w/M/S     Monitor with speaker

    T/S          Talk and monitor with headset and speaker

    M            Monitor with headset only

TERMINATION LOCATIONS:

Show the terminations sequentially in each location under the responsible agency. Each termination should have a subitem number, test code, and an entry to show the capability. To complete the circuit between agencies, an entry should be made for each location. Entries are used for information only when the termination is the customer's responsibility.

## FORMAT 2752 - POINT-TO-POINT TERMINATIONS

This format is used to state requirements for point-to-point communications except longline telephone and recording requirements. Either this format or Format 2720 may be used depending on the type of presentation desired. Follow the preparation instructions for Format 1000.

CIRCUIT TITLE:

All circuits must be identified by their proper, official title to facilitate implementation and access control. If desired, the common name or abbreviation may be entered in parentheses after the proper title. If used, enter circuit numbers, call signs, or bit rates.

RESPONSIBLE AGENCY:

Enter the name of the responsible agency involved in the circuit termination.

SUBITEM:

This number may be single digit or decimal coded and is a suffix to the item number.

TEST CODE:

Enter the applicable test code for each subitem.

NOTE:

If notes are required to clarify the entries, enter a reference number and explain in a note.

CAP (CAPABILITY):
Enter one of the following communications circuit capability symbols opposite each item:

    T                 Talk and monitor (headset only)

    T w/M/S       Monitor with speaker

    T/S           Talk and monitor with headset and speaker

    M             Monitor with headset only

TERMINATION LOCATIONS:
Show the terminations sequentially in each location under the responsible agency. Each termination should have a subitem number, test code, and an entry to show the capability. To complete the circuit between agencies, an entry should be made for each location. Entries are used for information only when the termination is the customer's responsibility.


## FORMAT 2753 - TELETYPE TERMINATIONS

This format is used to state requirements/support responses for teletype communication except longline telephone and recording requirements. Either this format or Format 2720 may be used depending on the type of presentation desired. Follow the preparation instructions for Format 1000.

CIRCUIT TITLE:
All circuits must be identified by their proper, official title to facilitate implementation and access control. If desired, the common name or abbreviation may be entered in parentheses after the proper title. Circuit numbers, call signs, or bit rates, if they are to be used, are to be entered.

RESPONSIBLE AGENCY:
Enter the name of the responsible agency involved in the circuit termination.

SUBITEM:
This number may be single digit or decimal coded and is a suffix to the item number.

TEST CODE:
Enter the applicable test code for each subitem.

NOTE:
If notes are required to clarify the entries, enter a reference number and explain in a note.

CAP (CAPABILITY):
Enter one of the following communications circuit capability symbols opposite each item:

| | |
|---|---|
| T/O | Transmit only |
| R/O | Receive only |
| R/T | Receive and transmit |
| H | Half duplex |
| F | Full duplex |

TERMINATION LOCATIONS:
Show the terminations sequentially in each location under the responsible agency. Each termination should have a subitem number, test code, and an entry to show the capability.  To complete the circuit between agencies, an entry should be made for each location.  Entries are used for information only when the termination is the customer's responsibility.


## FORMAT 2754  -  SECURE DATA TERMINATIONS

This format is used to state requirements for secure data communications except longline telephone and recording requirements.  Either this format or Format 2720 may be used depending on the type of presentation desired.  Follow the preparation instructions for Format 1000.

CIRCUIT TITLE:
All circuits must be identified by their proper, official title to facilitate implementation and access control.  If desired, the common name or abbreviation may be entered in parentheses after the proper title.  If used, enter circuit numbers, call signs, or bit rates.

RESPONSIBLE AGENCY:
Enter the name of the responsible agency involved in the circuit termination.

SUBITEM:
This number may be single digit or decimal coded and is a suffix to the item number.

TEST CODE:
Enter the applicable test code for each subitem.

NOTE:  If notes are required to clarify the entries, enter a reference number and explain in a note.

CAP (CAPABILITY):
Enter one of the following communications circuit capability symbols opposite each item:

| | |
|---|---|
| T/O | Transmit only |
| R/O | Receive only |
| R/T | Receive and transmit |
| H | Half duplex |
| F | Full duplex |

TERMINATION LOCATIONS:
Show the terminations sequentially in each location under the responsible agency. Each termination should have a subitem number, test code, and an entry to show the capability.  To complete the circuit between agencies, an entry should be made for each location.  Entries are used for information only when the termination is the customer's responsibility.


## FORMAT 2755 - VIDEO/DATA TERMINATIONS

This format is used to state requirements for television/data communications except longline telephone and recording requirements.  Either this format or Format 2720 may be used depending on the type of presentation desired.  Indicate the TV circuits and terminations required.  The Format 2800 series will be used to request the required TV cameras or monitors and to stipulate the subject or coverage to be viewed. Follow the preparation instructions for Format 1000.

CIRCUIT TITLE:
All circuits must be identified by their proper, official title to facilitate implementation and access control.  If desired, the common name or abbreviation may be entered in parentheses after the proper title.  If used, enter circuit numbers, call signs, or bit rates.

RESPONSIBLE AGENCY:
Enter the responsible agency involved in the circuit termination.

SUBITEM:
This number may be single digit or decimal coded and is a suffix to the item number.

TEST CODE:
Enter the applicable test code for each test item.

NOTE:
If notes are required to clarify the entries, enter a reference number and explain in note.

CAP  (CAPABILITY):  Enter one of the following communications circuit capability symbols opposite each item:

| | |
|---|---|
| T/O | Transmit only |
| R/O | Receive only |
| R/T | Receive and transmit |
| H | Half duplex |
| F | Full duplex |

TERMINATION LOCATIONS:
Show the terminations sequentially in each location under the responsible agency. Each termination should have a subitem number, test code, and an entry to show the capability.  To complete the circuit between agencies, an entry should be made for each location.  Entries are used for information only when the termination is the customer's responsibility.


**FORMAT 2756 - VOICE RADIO TERMINATIONS**

        This format is used to state requirements for voice radio communications except longline telephone and recording requirements.  Either this format, Format 2710, or 2720 may be used depending on the type of presentation desired.  Follow the preparation instructions for Format 1000.

CIRCUIT TITLE:
All circuits must be identified by their proper, official title to facilitate implementation and access control.  If desired, the common name or abbreviations may be entered in parentheses after the proper title.  If used, enter circuit numbers, call signs, or bit rates.

RESPONSIBLE AGENCY:
Enter the responsible agency involved in the circuit termination.

SUBITEM:
This number may be single digit or decimal coded and is a suffix to the item number.

TEST CODE:
Enter the applicable test code for each subitem.

NOTE:
If notes are required to clarify the entries, enter a reference number and explain in note.

CAP (CAPABILITY):
Enter one of the following communications circuit capability symbols opposite each item:

| | |
|---|---|
| T/O | Transmit only |
| R/O | Receive only |
| R/T | Receive and transmit |
| H | Half duplex |
| F | Full duplex |
| T | Talk and monitor (headset only) |
| T w/M/S | Monitor with speaker |
| T/S | Talk and monitor with headset and speaker |
| M | Monitor with headset only |

TERMINATION LOCATIONS:
Show the terminations sequentially in each location under the responsible agency. Each termination should have a subitem number, test code, and an entry to show the capability. To complete the circuit between agencies, an entry should be made for each location. Entries are used for information only when the termination is the customer's responsibility.


**FORMAT 2757 - MISCELLANEOUS TERMINATIONS**

This format is used to state requirements for miscellaneous communications except longline telephone and recording requirements. Either this format, Format 2710, or 2720 may be used depending on the type of presentation desired. Follow the preparation instructions for Format 1000.

CIRCUIT TITLE:
All circuits must be identified by their proper, official title to facilitate implementation and access control. If desired, the common name or abbreviation may be entered in parentheses after the proper title. If used, enter circuit numbers, call signs, or bit rates.

RESPONSIBLE AGENCY:
Enter the responsible agency involved in the circuit termination.

SUBITEM:
This number may be single digit or decimal coded and is a suffix to the item number.

TEST CODE:

Enter the applicable test code for each subitem.

NOTE:
If notes are required to clarify the entries, enter a reference number and explain in note.

CAP (CAPABILITY):
Enter one of the following communications circuit capability symbols opposite each item:

| | |
|---|---|
| T/O | Transmit only |
| R/O | Receive only |
| R/T | Receive and transmit |
| H | Half duplex |
| F | Full duplex |
| T | Talk and monitor (headset only) |
| T w/M/S | Monitor with speaker |
| T/S | Talk and monitor with headset and speaker |
| M | Monitor with headset only |

TERMINATION LOCATIONS:
Show the terminations sequentially in each location under the responsible agency. Each termination should have a subitem number, test code, and an entry to show the capability.  To complete the circuit between agencies, an entry should be made for each location.  Entries are used for information only when the termination is the customer's responsibility.


## FORMAT 2760 - COMMUNICATIONS RECORDINGS

This format is used to levy requirements for recording radio, television, telephone, intercom (TOPS, OIS) and other communications.  Follow the preparation instructions for Format 1000.

SUBITEM:
Enter an appropriate sequential number or identification as a subset suffix to the main item number.

TEST CODE:
Enter the applicable test code for each subitem.

STATION OR LOCATION:
Indicate the station or location that will record the communication data.

RECORDING REQUIREMENTS:

List the data to be recorded, the method of recording, and any special recording format.

AUDIO/VIDEO RECORDING:
Enter the time the recording is to be initiated (START), for example, T-0, Acquisition of Signal (AOS); the time the recording is to be terminated (STOP), for example, T-350 sec, Loss of Signal (LOS); enter the type of recording, for example, audio (A), video (V), or both (AV); and enter the recording speed (SPED) in inches per second or millimeters per second.  Indicate units and state the reel size limitations of the playback equipment, for example, 3, 5, 7, or 10-1/2 inches.

TIME CORL (TIME CORRELATION):
Enter Yes or No to indicate if time correlation is required on the recording.

REMARKS:
List any special instructions or remarks to clarify the recording requirements.  If more space is required, use a reference subitem number and explain.


**FORMAT 2770** - **TELEPHONE**

This format is used by the requesting agency to list the requirements for telephone service.  Follow the preparation instructions for Format 1000.

TYPE: ADMINISTRATIVE ( )  OPERATIONS ( )
Indicate the type of telephone service being requested.

CLASS OF SERVICE:
Indicate the class of service based on contract.  Three classes of telephone service are available:

Class A - Service is government furnished at no charge and allows dialing access to surrounding communities.

Class B - Service is government furnished but chargeable to the user at the local standard telephone company rate.

Class C - Service is government furnished at no charge to the user but does not provide dialing access to local communities.

LINES:
Enter the number of lines required for each class of service.

EXTENSIONS:
Enter the number of extensions per line required for each class of service.

LOCATION:
Enter the location of the telephone service being requested by indicating the name or number of the station or center, the name/number of the building, and the number of the room.

REMARKS:
Enter any remarks necessary to clarify entries made.

Information on this format may be used by the support agency for planning purposes and to serve as justification for plant expansion. Actual installation of instruments may require that additional formats be completed by the requesting agency. See regulations of the support agency which will receive the document.


## FORMAT 2780 - OTHER COMMUNICATIONS

This format is used to define general communication requirements not covered in other categories such as underwater communications. Follow the preparation instructions for Format 1000.

REQUIREMENT ( )  INFORMATION ( ):
Indicate whether each item number submitted is a requirement for support from the support agency or is submitted for informational purposes only. Define general requirements not specified on other communication formats.


## FORMAT 2800 - VIDEO

This format is used by the requesting agency to specify operations, documentary, and public relations television requirements. This equipment will be furnished, installed, and maintained in accordance with existing agreements between the support agency and the requesting agency. All systems will be in accordance with the standards of the Electronics Industry Association (EIA) and the National Television Standards Committee. Follow the preparation instructions for Format 1000.

TYPE EQUIPMENT:
Specify whether cameras and monitors are required to cover the items listed in SUBJECT TO BE VIEWED and whether the equipment is to be fixed mobile or portable.

SUBJECT TO BE VIEWED:
Describe the object or action to be viewed including size of area to be covered, direction of motion (if any), day or night coverage, and other considerations.  Describe pertinent details that will help the planning  engineers.

LOCATION:
Give the location or area of usage.

PERIOD:
Specify the period during which the item is to be viewed.

REMARKS:
State the purpose for which the requirement is needed.  The more information that is furnished, the better the planning of proper equipment to meet the requesting agency's needs.  (Requesting agency's recommendations for obtaining the coverage desired and any other pertinent information may be included in this entry; however, they will not be considered part of the requirements.)  Indicate whether transmission protection is required by adding Secure Circuit, Unsecure Circuit, or Encrypt for Transmission Only (EFTO).  Video recordings disposition will be listed on Format 4232 - Data Disposition.  Identify the recorded signal by using the number of the requirement which describes the subject to be viewed.


## FORMAT 2810 - ON-BOARD VIDEO

This format is used by the requesting agency to specify operations, documentary, and public relations television requirements.  This equipment will be furnished, installed, and maintained in accordance with existing agreements between the support agency and the requesting agency.  All systems will be in accordance with the standards of the Electronics Industry Association (EIA) and the National Television Standards Committee.  Follow the preparation instructions for Format 1000.

TYPE EQUIPMENT:
Specify whether cameras and monitors are required to cover the items listed in SUBJECT TO BE VIEWED and whether the equipment is to be fixed mobile or portable.

SUBJECT TO BE VIEWED:
Describe the object or action to be viewed, including size of area to be covered, direction of motion (if any), day or night coverage, and other considerations.  Describe pertinent details that will help the planning engineers.

LOCATION:
Give the location or area of usage.

PERIOD:
Specify the period during which the item is to be viewed.

REMARKS:
State the purpose for which the requirement is needed.  The more information that is furnished, the better the planning of proper equipment to meet the requesting agency's needs.  (Requesting agency's recommendations for obtaining the coverage desired and any other pertinent information may be included in this entry; however, they will not be considered part of the requirements.)  Indicate whether transmission protection is required by adding Secure Circuit, Unsecure Circuit, or Encrypt for Transmission Only (EFTO).  Video recordings disposition will be listed on Format 4232 - Data Disposition.  Identify the recorded signal by using the number of the requirement which describes the subject to be viewed.


## FORMAT 2811 - ON-BOARD VIDEO DOWNLINK

This format is used by the requesting agency to specify operations, documentary, and public relations television requirements.  This equipment will be furnished, installed, and maintained in accordance with existing agreements between the support agency and the requesting agency.  All systems will be in accordance with the standards of the Electronics Industry Association (EIA) and the National Television Standards Committee.  Follow the preparation instructions for Format 1000.

TYPE EQUIPMENT:
Specify whether cameras and monitors are required to cover the items listed in SUBJECT TO BE VIEWED and whether the equipment is to be fixed mobile or portable.

SUBJECT TO BE VIEWED:
Describe the object or action to be viewed including size of area to be covered, direction of motion, day or night coverage, and other considerations.  Describe pertinent details that will help the planning engineers.

LOCATION:
Give the location or area of usage.

PERIOD:
Specify the period during which the item is to be viewed.

REMARKS:
State the purpose for which the requirement is needed.  The more information that is furnished, the better the planning of proper equipment to meet the requesting agency's needs.  (Requesting agency's recommendations for obtaining the coverage desired and any other pertinent information may be included in this entry; however, they will not

be considered part of the requirements).  Indicate whether transmission protection is required by adding Secure Circuit, Unsecure Circuit, or Encrypt for Transmission Only (EFTO).  Video recordings disposition will be listed on Format 4232 - Data Disposition.  Identify the recorded signal by using the number of the requirement which describes the subject to be viewed.


## FORMAT 2812 - ON-BOARD VIDEO DISPLAYS

This format is used by the requesting agency to specify operations, documentary, and public relations television requirements.  This equipment will be furnished, installed, and maintained in accordance with existing agreements between the support agency and the requesting agency.  All systems will be in accordance with the standards of the Electronics Industry Association (EIA) and the National Television Standards Committee.  Follow the preparation instructions for Format 1000.

TYPE EQUIPMENT:
Specify whether cameras and monitors are required to cover the items listed in SUBJECT TO BE VIEWED and whether the equipment is to be fixed mobile, or portable.

SUBJECT TO BE VIEWED:
Describe the object or action to be viewed including size of area to be covered, direction of motion, day or night coverage, and other considerations.  Describe pertinent details that will help the planning  engineers.

LOCATION:
Give the location or area of usage.

PERIOD:
Specify the period during which the item is to be viewed.

REMARKS:
State the purpose for which the requirement is needed.  The more information that is furnished, the better the planning of proper equipment to meet the requesting agency's needs.  (Requesting agency's recommendations for obtaining the coverage desired and any other pertinent information may be included in this entry; however, they will not be considered part of the requirements).  Indicate whether transmission protection is required by adding Secure Circuit, Unsecure Circuit, or Encrypt for Transmission Only (EFTO).  Video recordings disposition will be listed on Format 4232 - Data Disposition.  Identify the recorded signal by using the number of the requirement which describes the subject to be viewed.

**FORMAT 2813 - ON-BOARD VIDEO RECORDINGS**

This format is used by the requesting agency to specify operations, documentary, and public relations television requirements.  This equipment will be furnished, installed, and maintained in accordance with existing agreements between the support agency and the requesting agency.  All systems will be in accordance with the standards of the Electronics Industry Association (EIA) and the National Television Standards Committee.  Follow the preparation instructions for Format 1000.

TYPE EQUIPMENT:
Specify whether cameras and monitors are required to cover the items listed in SUBJECT TO BE VIEWED and whether the equipment is to be fixed mobile or portable.

SUBJECT TO BE VIEWED:
Describe the object or action to be viewed including size of area to be covered, direction of motion, day or night coverage, and other considerations.  Describe pertinent details that will help the planning engineers.

LOCATION:
Give the location or area of usage.

PERIOD:
Specify the period during which the item is to be viewed.

REMARKS:
State the purpose for which the requirement is needed.  The more information that is furnished, the better the planning of proper equipment to meet the requesting agency's needs.  (Requesting agency's recommendations for obtaining the coverage desired and any other pertinent information may be included in this entry; however, they will not be considered part of the requirements.)  Indicate whether transmission protection is required by adding Secure Circuit, Unsecure Circuit, or Encrypt for Transmission Only (EFTO).  Video recordings disposition will be listed on Format 4232 - Data Disposition.  Identify the recorded signal by using the number of the requirement which describes the subject to be viewed.


**FORMAT 2820 - LAUNCH PAD VIDEO**

This format is used by the requesting agency to specify operations, documentary, and public relations television requirements.  This equipment will be furnished, installed, and maintained in accordance with existing agreements between the support agency and the requesting agency.  All systems will be in accordance with the standards of the Electronics Industry Association (EIA) and the National Television Standards Committee.  Follow the preparation instructions for Format 1000.

TYPE EQUIPMENT:
Specify whether cameras and monitors are required to cover the items listed in
SUBJECT TO BE VIEWED and whether the equipment is to be fixed mobile, or
portable.

SUBJECT TO BE VIEWED:
Describe the object or action to be viewed including size of area to be covered, direction
of motion, day or night coverage, and other considerations.  Describe pertinent details
that will help the planning  engineers.

LOCATION:
Give the location or area of usage.

PERIOD:
Specify the period during which the item is to be viewed.

REMARKS:
State the purpose for which the requirement is needed.  The more information that is
furnished, the better the planning of proper equipment to meet the requesting agency's
needs.  (Requesting agency's recommendations for obtaining the coverage desired and
any other pertinent information may be included in this entry; however, they will not
be considered part of the requirements.)  Indicate whether transmission protection is
required by adding Secure Circuit, Unsecure Circuit, or Encrypt for Transmission Only
(EFTO).  Video recordings disposition will be listed on Format 4232 - Data Disposition.
Identify the recorded signal by using the number of the requirement which describes
the subject to be viewed.


## FORMAT 2821 - TRACKING VIDEO TELEVISION

This format is used by the requesting agency to specify operations, documentary,
and public relations television requirements.  This equipment will be furnished,
installed, and maintained in accordance with existing agreements between the support
agency and the requesting agency.  All systems will be in accordance with the
standards of the Electronics Industry Association (EIA) and the National Television
Standards Committee.  Follow the preparation instructions for Format 1000.

TYPE EQUIPMENT:
Specify whether cameras and monitors are required to cover the items listed in
SUBJECT TO BE VIEWED and whether the equipment is to be fixed mobile or
portable.

SUBJECT TO BE VIEWED:
Describe the object or action to be viewed including size of area to be covered, direction of motion, day or night coverage, and other considerations.  Describe pertinent details that will help the planning  engineers.

LOCATION:
Give the location or area of usage.

PERIOD:
Specify the period during which the item is to be viewed.

REMARKS:
State the purpose for which the requirement is needed.  The more information that is furnished, the better the planning of proper equipment to meet the requesting agency's needs.  (Requesting agency's recommendations for obtaining the coverage desired and any other pertinent information may be included in this entry; however, they will not be considered part of the requirements.)  Indicate whether transmission protection is required by adding Secure Circuit, Unsecure Circuit, or Encrypt for Transmission Only (EFTO).  Video recordings disposition will be listed on Format 4232 - Data Disposition.  Identify the recorded signal by using the number of the requirement which describes the subject to be viewed.


## FORMAT 2822 - VIDEO DISPLAYS

This format is used by the requesting agency to specify operations, documentary, and public relations television requirements.  This equipment will be furnished, installed, and maintained in accordance with existing agreements between the support agency and the requesting agency.  All systems will be in accordance with the standards of the Electronics Industry Association (EIA) and the National Television Standards Committee.  Follow the preparation instructions for Format 1000.

TYPE EQUIPMENT:
Specify whether cameras and monitors are required to cover the items listed in SUBJECT TO BE VIEWED and whether the equipment is to be fixed mobile or portable.

SUBJECT TO BE VIEWED:
Describe the object or action to be viewed including size of area to be covered, direction of motion, day or night coverage, and other considerations.  Describe pertinent details that will help the planning engineers.

LOCATION:
Give the location or area of usage.

PERIOD:
Specify the period during which the item is to be viewed.

REMARKS:
State the purpose for which the requirement is needed.  The more information that is furnished, the better the planning of proper equipment to meet the requesting agency's needs.  (Requesting agency's recommendations for obtaining the coverage desired and any other pertinent information may be included in this entry; however, they will not be considered part of the requirements).  Indicate whether transmission protection is required by adding Secure Circuit, Unsecure Circuit, or Encrypt for Transmission Only (EFTO).  Video recordings disposition will be listed on Format 4232 - Data Disposition.  Identify the recorded signal by using the number of the requirement which describes the subject to be viewed.


## FORMAT 2823 - **VIDEO RECORDINGS**

This format is used by the requesting agency to specify operations, documentary, and public relations television requirements.  This equipment will be furnished, installed, and maintained in accordance with existing agreements between the support agency and the requesting agency.  All systems will be in accordance with the standards of the Electronics Industry Association (EIA) and the National Television Standards Committee.  Follow the preparation instructions for Format 1000.

TYPE EQUIPMENT:
Specify whether cameras and monitors are required to cover the items listed in SUBJECT TO BE VIEWED and whether the equipment is to be fixed mobile or portable.

SUBJECT TO BE VIEWED:
Describe the object or action to be viewed including size of area to be covered, direction of motion, day or night coverage, and other considerations.  Describe pertinent details that will help the planning  engineers.

LOCATION:
Give the location or area of usage.

PERIOD:
Specify the period during which the item is to be viewed.

REMARKS:
State the purpose for which the requirement is needed.  The more information that is furnished, the better the planning of proper equipment to meet the requesting agency's needs.  (Requesting agency's recommendations for obtaining the coverage desired and any other pertinent information may be included in this entry; however, they will not

be considered part of the requirements.)  Indicate whether transmission protection is required by adding Secure Circuit, Unsecure Circuit, or Encrypt for Transmission Only (EFTO).  Video recordings disposition will be listed on Format 4232 - Data Disposition.  Identify the recorded signal by using the number of the requirement which describes the subject to be viewed.


## FORMAT 2824 - OTHER VIDEO

This format is used to define general video requirements not covered in other categories.  Follow the preparation instructions for Format 1000.

REQUIREMENT ( )  INFORMATION ( ):
Indicate whether each item number submitted is a requirement for support from the support agency or is submitted for informational purposes only.  Define general requirements not specified on other video formats.


## FORMAT 2900 - SIGNATURE DATA

This format is used to specify radar and optical signature data requirements.  Follow the preparation instructions for Format 1000.

DATA REQUIRED:
Enter each type of radar, acoustical, and optical signature data required.  Specify objects of interest for each type of data.  Include frequencies and polarizations required for optical signature data on each object.  Identify each item separately.

MISSION INTERVAL (RANGE, ALTITUDE, TIME):
Enter the range, altitude, time interval, or function during which coverage is required (0 - 50 miles, 50 - 1500 miles).  Indicate vehicle position by appropriate coordinates.  Use REMARKS if additional space is required to define the intervals.  Where appropriate for further clarity, include the geographic location or desired site.

DATA POINTS/SECOND:
Enter the minimum number of data points which should be read and tabulated during data reduction (1, 2, 4, 10, 1/10 sec).

DATA PRIORITY:
Indicate whether the data requirement is Mandatory (M), Required (R), or Desired (D) (see UDS Handbook, chapter 3, for further explanation of priority).

DATA ACCURACY:
Indicate the required data accuracy value, such as plus or minus 5 ft, plus or minus 2 percent.  Indicate the class of the value (see UDS Handbook, chapter 3, for further explanation of accuracy class).

REAL TIME RELAY:
State whether information is needed in voice or digital form and to what point it is to be relayed.

REMARKS:
Enter any remarks necessary to clarify entries made.

NOTE:
All metric data are normally recorded with timing.  It is not necessary to state metric timing requirements or that required data are versus time unless a specific or unique timing signal or rate is required.

NOTE:
Signature data are normally recorded at the PRF rate and with timing.  It is not necessary to specify data points/second or timing unless a  specific or unique timing signal or data rate is required.


## FORMAT 3000 - REAL TIME DATA DISPLAY/CONTROL

The real time data section of the UDS has been designed to provide for the most complex programs.  It includes all known categories of real time data requirements and provides for supplemental documentation where this may be determined to be necessary.  Follow the preparation instructions for Format 1000.

This format is used to describe the real time data requirements.  Real time data are defined as data available (in usable form) in time to permit their use in affecting the test while it is in progress.  Real time data fall into two categories:  digital data and analog data.

Real time digital data are the products of the Real Time Data System (RTDS).  RTDS support is provided when the need for precise real time data is critical as in positioning vehicles used in reentry studies or controlling multiple drones in formation flights.

Real time analog data are produced by a particular sensor system such as radar and telemetry and displayed as needed for flight safety decisions, aircraft and drone vectoring, and vehicle performance observation.  These data are nearly always in analog form and are essentially raw data except for such corrections or limited processing as may be provided within the sensor system.

REQUIREMENT ( )  INFORMATION ( ):

Indicate whether each item number submitted is a requirement for support from the support agency or is submitted for informational purposes only.  Describe the real time data requirements of the program mission or test in sufficient detail to ensure complete understanding of the organization and requirements of this UDS section.  Identify categories of requirements to be addressed although specifics for that category are not presently available.  Large programs or tests should identify all supplemental documentation by title, number, and minimum contents.  Include broad outlines wherever possible.  Small programs or tests will not require all of the categories of real time data requirements.  Those requirements that are to be covered and those that are not applicable are to be identified.

Request for display of real time analog data as defined here should be included with the basic data/support reference such as telemetry display in Format 2200 series, tracking radar display (trajectory) in Format 2100 series.

## FORMAT 3010 - REAL TIME FLIGHT CONTROL/SUPPORT CENTERS

This format is used to describe the functions of each flight control/support center with respect to the program/mission.  Follow the preparation instructions for Format 1000.

REQUIREMENT:

Show how each agency controls or supports the program or mission through its general or unique capabilities.

## FORMAT 3011 - REAL TIME FLIGHT CONTROL DATA ACQUISITION

This format is used to specify the control data acquisition and control requirements and configurations at the remote sites and control centers.  Follow the preparation instructions for Format 1000.

REQUIREMENT:

Specify the control data acquisition and control requirements for each mission and the data display and control configurations at the remote sites and the control centers.

If supplementary format documentation is to be required from the requesting agency, state the documentation requirements including title, number, and minimum contents.

## FORMAT 3020 - REAL TIME DISPLAYS

This format is used to plan all real time display requirements, so they can be clearly and completely displayed in the proper sequence. Follow the preparation instructions for Format 1000.

PERIOD REQUIRED:
Enter the periods (quarter and year) during which the requirements must be supported.

INFORMATION TO BE DISPLAYED:
State the information to be displayed such as countdown information, sequencer status information, hold/fire, master hold, and other information and status time.

PERIOD OF OPERATION:
Enter the start (FROM), stop (TO), and total time to the nearest minute and second (or tenth of a second, if applicable).

INDICATORS:
Enter the number of indicators required to display the information and enter the type of display, for example, plotting board, audio/visual, and strip chart.

LOCATION OF VISUAL INDICATORS:
State the location of the indicator as closely as possible. Give location of display in the designated area (west wall, console number, rack or panel, or numbered location of display such as plotting board number 1).

REMARKS:
Enter any remarks necessary to clarify entries made.


**FORMAT 3021** - **REAL TIME CONSOLE COMMAND PANELS**

This format is used to identify the functions performed by the command console. This format is to be completed whether the console is provided by the requesting or support agency. Follow the preparation instructions for Format 1000.

CONSOLE TITLE AND LOCATION:
Enter the console title and list the recommended stations at which the console should be employed.

FUNCTION:
Identify the command labels to be used.

PUSHBUTTON INDICATORS:
List the alpha or numerical identifier for each pushbutton indicator.

CODE:
Enter the digital command code for each function listed including vehicle and system addresses.

REMARKS:
Enter any remarks necessary to clarify entries made.


## FORMAT 3022 - REAL TIME CONSOLE ANALOG RECORDERS

This format is used to identify the real time console analog measurements required and is to be completed whether the console is provided by the requesting or support agency.  Follow the preparation instructions for Format 1000.

MEASUREMENT:
Enter the measurement name and number to be recorded.

LINK:
Identify the RF link, as appropriate, by which the measurement is transmitted.

SOURCE:
Identify the telemetry SCO (Subcarrier Oscillator) by which the measurement is transmitted.

PEN NUMBER:
Specify the desired recorder pen number for each measurement.

REMARKS:
Use this entry to identify the console of which the recorder will be a part, its recommended location, paper speed, calibration requirements, and other clarifying remarks.


## FORMAT 3023 - REAL TIME CONSOLE DRAWINGS

This format is to be used to provide a drawing of the layout of the consoles and associated panels.  Follow the preparation instructions for Format 1000.

REQUIREMENT:
Provide a drawing of the desired or actual (if supplied by the requesting agency) layout of the consoles and associated panels.

## FORMAT 3024 - REAL TIME CONSOLE MODULE DESCRIPTION

This format is used by the support agency to describe the equipment provided to support the console module requirements.  Follow the preparation instructions for Format 1000.

STATION DESIGNATION:
Enter the station designator along with the station call letters and number.

RESPONSE:
Describe each of the console modules to be provided and explain the operational concept where applicable.


## FORMAT 3025 - REAL TIME-SUMMARY OF CONSOLE LOCATIONS

This format is used by the support agency to summarize the consoles located at each station.  Follow the preparation instructions for Format 1000.

STATION DESIGNATION:
Enter the station designator along with the site where the console is located.

REMARKS:
Include any remarks that will further explain the above entries.


## FORMAT 3026 - REAL TIME-SUMMARY OF CONSOLE MODULE LOCATIONS

This format is used by the support agency to summarize the modules used on each console.  Follow the preparation instructions for Format 1000.

CONSOLE/STATION DESIGNATION:
List the applicable type of consoles.  Enter the station designator where the console module is located.

MODULE:
List the console modules to be provided and enter the quantity of the modules in the matrix under the appropriate console type.

REMARKS:
Include any remarks that will further explain the above entries.

**FORMAT 3030 - REAL TIME-OTHER GROUP DISPLAYS AND CONTROL**

This format is used by the support agency to describe displays and controls not covered elsewhere in this document.  Follow the preparation instructions for Format 1000.

STATION DESIGNATION:
Enter the station designator along with the station call letters and number.

RESPONSE:
Describe the displays and controls provided but not covered in other UDS sections.  Include fast access sites, digital clock displays, plot boards, flight dynamics, teleprinters and alphanumeric hard copy outputs when applicable.


**FORMAT 3040 - REAL TIME DATA FORMATS**

This format is used to describe the real time data format requirements.  Follow the preparation instructions for Format 1000.

REQUIREMENT:
Briefly describe the data formats to be used for transmission of tracking, telemetry, command, and other real time data to the requesting agency.  If supplementary format documentation is required, state the documentation requirement including title, number and minimum contents.


**FORMAT 3050 - REAL TIME TRACKING DATA FORMAT CONTROL**

This format is used to specify the formats real time tracking data are to be transmitted to the requesting agency.  Data formats for existing low speed character systems and high speed bit systems are required.  Words 1 and 2 of the format are reserved by the support agency for a message label and the time word.  Follow the preparation instructions for Format 1000.

REQUIREMENT:
Specify the real time tracking data required and whether high speed, low speed, or high and low speed transmission is required.  State whether raw or smooth data are to be provided.  Identify the requesting agency stations where the data are to be transmitted.  Concisely state what each bit or character of the format is to be used for.  Provide a sketch for each format.  If supplementary documentation is used for defining formats required, specifically identify documents and applicable sections/paragraphs.


**FORMAT 3051 - REAL TIME TELEMETRY DATA FORMAT CONTROL**

This format is used to describe in general terms the real time telemetry data formats.  Follow the preparation instructions for Format 1000.

REQUIREMENT:
Specify the real time telemetry data required and identify the requesting agency stations to where the data are transmitted.  If supplementary documentation is used for defining the data train characteristics, specifically identify document and applicable sections/paragraphs.


**FORMAT 3052 - REAL TIME TELEMETRY DATA FORMATS**

This format is used to list telemetry data requirements and location of data in the real time data train.  Follow the preparation instructions for Format 1000.

SUBITEM:
This number may be single digit or decimal coded and is a suffix to the item number.

TEST CODE:
Enter the test code for each subitem.

MEASUREMENT NUMBER:
Enter the measurement number of the test data to be provided in real time.

MEASUREMENT NAME:
Enter the measurement name of the data to be provided in real time.

SAMPLES PER SECOND:
Enter the relayed sampling rate of each measurement.

WORD NUMBER:
Assign word number for each measurement for location of data within the data frame.

FRAME NUMBER:
Assign frame number for each measurement for location of data within the data train.

REMARKS:
Specify overhead type data that will be included in the data train such as sync words, source code, destination code, and frame count.  Identify location of overhead data train.  Use space of other clarifying information.  If supplementary documentation is used for specifying data train arrangement, specifically identify document and applicable section/paragraphs.

## FORMAT 3053 - REAL TIME COMMAND DATA FORMAT CONTROL

This format is used to list all high and low speed data formats required for command purposes.  Follow the preparation instructions for Format 1000.

REQUIREMENT:
Specify all high speed and low speed data formats required for command purposes.  For programming purposes, include all command lists which provide the data structures for each command.  Describe all mission/test interface formats.

Requirements for command computer programs that may be necessary at remote sites to standardize the command system or to implement a command system for a specific mission or test should be described on Format 3060 - Real Time Remote Site Data Processing.

## FORMAT 3060 - REAL TIME REMOTE SITE DATA PROCESSING

This format is used to specify the computer programs necessary for remote site data processor operations in support of a mission or test.  Included are programs for accepting data for site display, processing, or retransmission of raw or processed data to control centers or other sites.  Follow the preparation instructions for Format 1000.

REQUIREMENT:
Specify the programs that comprise system interfaces in the various systems such as command telemetry, tracking, and composite.

If supplemental documentation is required, state the documentation requirements including title, number, and minimum contents.

## FORMAT 3070 - REAL TIME DATA TESTING

This format is used to define the test requirements necessary to ensure capability to transmit and receive real time data.  Follow the preparation instructions for Format 1000.

REQUIREMENT:
Briefly describe the validation testing required to ensure the ability to transmit and receive real time telemetry, tracking, and command data.  If supplementary documentation is required, state the documentation requirements including title, number, and minimum contents.

## FORMAT 3071 - REAL TIME DATA INTERFACES

This format is used for real time data requirements not covered elsewhere in UDS Sections 3000 through 3099.  Follow the preparation instructions for Format 1000.

REQUIREMENT:
Briefly describe the data interfaces which evolve from transmission and processing requirements of real time data.


## FORMAT 3072 - **REAL TIME DATA INTERFACE CRITERIA**

This format is used to provide the support agency with information needed to determine interface requirements when data generated by requesting agency instrumentation are to be transmitted and processed by the support agency.  Follow the preparation instructions for Format 1000.

PERIOD REQUIRED:
Enter the periods (quarter and year) during which the requirement must be supported.

DATA TYPE:
Indicate general type of data:  analog or digital.

SOURCE:
List geographical locations of the data source.  Give the magnitude of the output impedance of the source and under type indicate whether this output is balanced or single-ended.

TERMINATION:
Indicate information as in data type above for the receiving termination.

NOTE:
If data type indicates digital data, omit the analog data entry.  If this data is analog, complete the following:

ANALOG DATA:
Indicate the general waveshape (variable frequency sine wave, variable dc voltage).  If this waveform is other than a sine wave, illustrate with drawings as required.  State output voltage, voltages, or voltage ranges as applies.  Indicate voltages required for receiver operations based on above outputs less transmission losses.  State frequency, frequencies, or frequency range of operations as applies.  State signal-to-noise ratio required at the receiver.

NOTE:
If data type is analog data, omit the digital data entry.  If this data is digital, complete the following:

DIGITAL DATA:
State the binary 1 indication (NRZ-6 V).  If other than a non-return to zero voltage level, illustrate with drawings as required.  State information for binary zero.  Indicate general output data format (8-bit, parallel, serial) and state frame rate or rates of data for parallel data, for instance, the rate at which parallel words are transmitted.  (For serial data, the frame rate is equal to the bit rate.)  Indicate any clock outputs which require transmission or are available for use.  If data equipment requires external interrupts, so indicate.  Indicate transmission error rate tolerance.


## FORMAT 3073 - REAL TIME DATA DISTRIBUTION

This format is used to list the distribution of real time data.  The requirements have been established elsewhere in the document.  Follow the preparation instructions for Format 1000.

REQUIREMENT:
Enter the real time data distribution requirements.


## FORMAT 3100 - PHOTOGRAPHIC

This format is used to state general photographic requirements in narrative form.  Detailed documentary requirements will be stated on Format 3110 and detailed engineering requirements stated on Format 3120.  Follow the preparation instructions for Format 1000.

REQUIREMENT ( )  INFORMATION ( ):
Indicate whether each item number submitted is a requirement for support from the support agency or is submitted for informational purposes only.  Describe the requirements for photographic coverage including documentary, engineering, public affairs, and tracking.


## FORMAT 3110 - DOCUMENTARY PHOTOGRAPHIC

This format is used to identify detailed documentary photographic requirements and to establish their recommended processing instructions.  The number of copies and disposition must be included on Formats 4200 or 4233, Data Disposition - Detail - Photographic.  Follow the preparation instructions for Format 1000.

LOCATION:
Enter the location at which the desired photographic coverage is required.

CAMERA FORMAT:
Enter the size of film required:  4x5, 50 mm, 35 mm, 16 mm.

FOCAL LENGTH:
Enter the focal length of the lens to be used to obtain the required coverage.

FRAMES PER SECOND:
Enter the desired frame rate for motion picture coverage in frames/second.

FILM TYPE LOAD:
Enter the type film required and whether black and white or color coverage is required.  Include, where applicable, the film load required, for instance, three 400-foot reels, or one 100-foot reel.

INTERVAL:
Enter the time interval or function during which coverage is required.

CAMERA:
Enter requirement for a fixed or tracking camera.

EXPOSURE:
Enter the exposure required.  If flame exposure is desired, indicate by entering the temperature of the flame in Kelvin (K).

TIMING:
Usually, for engineering photography only, indicate if timing is required.  If a special or specific type of timing is required, it must be outlined; otherwise, the requestor will be furnished timing as available at the support agency.  Enter Not Required, if applicable.

REMARKS:
Enter any remarks necessary to clarify entries made.  Include the recommended processing instructions, if applicable.


**FORMAT 3120 - ENGINEERING SEQUENTIAL PHOTOGRAPHY**

This format is used to identify detailed engineering photographic requirements and to establish their recommended processing instructions.  The number of copies and disposition must be included on Formats 4200 or 4233, Data Disposition - Detail - Photographic.  Follow the preparation instructions for Format 1000.

LOCATION:
Enter the location at which the desired photographic coverage is required.

CAMERA FORMAT:

Enter the size of film required:  4x5, 50 mm, 35 mm, 16 mm.

FOCAL LENGTH:
Enter the focal length of the lens to be used to obtain the required coverage.

FRAMES PER SECOND:
Enter the desired frame rate for motion picture coverage in frames/second.

FILM TYPE LOAD:
Enter the type film required and whether black and white or color coverage is required.
Include, where applicable, the film load required, for instance, three 400-foot reels or
one 100-foot reel.

INTERVAL:
Enter the time interval or function during which coverage is required.

CAMERA:
Enter requirement for fixed or tracking camera.

EXPOSURE:
Enter the exposure required.  If flame exposure is desired, indicate by entering the
temperature of the flame in Kelvin (K).

TIMING:
Indicate if timing is required.  If a special or specific type of timing is required, it must
be outlined; otherwise, the requestor will be furnished timing as available at the
support agency.  Enter Not Required, if applicable.

REMARKS:
Enter any remarks necessary to clarify entries made.  Include the recommended
processing instructions, if applicable.


## FORMAT 3200 - METEOROLOGY

This format is used to establish general meteorological requirements for the
program/mission which cannot be adequately shown on other formats.  Follow the
preparation instructions for Format 1000.

REQUIREMENT ( )  INFORMATION ( ):
Indicate whether each item number submitted is a requirement for support from the support agency or is submitted for informational purposes only.  The entry should state general requirements for meteorological or climatological data that will be required for a program or mission.  This discussion may include

- the general requirement for the services of the DOD, National Oceanic and Atmospheric Administration (NOAA), and foreign weather services;

- the application of climatological data to operational test program problems;

- evaluation of data requirements to meet flight problems; and

- the analysis of accuracy and representation of environmental data required for flight evaluation purposes.


## FORMAT 3210 - **METEOROLOGICAL CONSTRAINTS**

This format is used to specify values of meteorological elements which could preclude successful accomplishment of test objectives or which could jeopardize an unprotected vehicle.  Follow the preparation instructions for Format 1000.

REQUIREMENT:
Specify the critical values of meteorological elements such as cloud cover, surface or upper wind velocities or shears, icing, and sea state, which could preclude successful accomplishment of test objectives.


## FORMAT 3220 - **METEOROLOGICAL FORECASTS**

This format is used to state the requirements for a forecast valid at or near T-0. Detailed forecasts should not be requested for more than 3 days prior to the valid time. The forecast services will encompass meteorological and climatological parameters. Follow the preparation instructions for Format 1000.

TIME REQUIRED:
State the number of days prior to or after launch day (F-3D, F+1D) and on launch day, the number of hours prior to or after launch (T-10H, T+8H) that the forecast is required.

FORECAST PARAMETERS:
State parameters or weather elements for which a forecast is required (precipitation and/or obstruction to vision, amount, base and top of clouds, horizontal visibility,

surface winds, sea and swell, vertical wind shear, jet stream, turbulence, freezing level, contrail level).  Use abbreviations listed in instructions for Format 3230.  Parameters should be separated into surface and upper air.  The range or altitude interval and maximum altitude for upper air parameters should be specified.

VALID TIME:
List here the number of hours a forecast will be required to remain valid (T-4H to T-0).

LOCATION:
Specify the location, geographical area, or flight area for which the forecast is required (impact, launch, burnout, reentry, recovery).

PURPOSE AND REMARKS:
State purpose the forecasts will be used.  Be specific (to calculate drag, to predict drift on recovery of nose cone).  Enter any other remarks necessary to clarify any inputs made.


## FORMAT 3230 - **METEOROLOGICAL OBSERVATIONS**

This format is used to request those meteorological parameters required to analyze data received before, during, or after the test or operation.  Follow the preparation instructions for Format 1000.

DATA REQUIRED:
Specify those parameters desired and indicate requirements for computed data.  Use the following abbreviations:

| | |
|---|---|
| Temp (Temperature) | R.I. (Refraction Index) |
| Pres (Pressure) | Dens (Density) |
| R.H. (Relative Humidity) | S.S. (Sea State) |
| Wind | Precip (Precipitation) |
| Visb (Visibility) | C.C. (Cloud Coverage) |
| SVP (Underwater sound velocity profile) | |

State additional data requirements.

SURFACE:
Specify the time, in minutes, the data are required (T-120, T-60, T-30, T-0).  Specify the location or geographical area where the data are required (launch, impact, flight area).

UPPER AIR:
Specify the time, in minutes, the data are required (T-120, T-60, T-30, T-0).  Specify the location, geographical area, or flight interval when the data are required (launch, burnout, reentry, impact).  State the intervals or increments of altitude when the data

shall be collected and recorded (500 m, 1 km).  Specify the maximum altitude or limits of the altitudes in 1,000 meters (km) when the data are required at the time listed above (100, 150, 200, 50-100, 100-200).

DATA PRIORITY:
Indicate whether the data requirement is mandatory (M), required (R), or desired (D).

DATA ACCURACY:
Indicate the required reduced data accuracy value (1 mb, 3 mb, 5 kts, 2%, 5%).  See chapter 3 for further explanation of priority.

PURPOSE AND REMARKS:
State the engineering purpose for the data and any remarks necessary to clarify the requirements made in the other entries or not covered elsewhere.


## FORMAT 3240 - METEOROLOGICAL INSTRUMENTATION LOCATION DIAGRAM

This format is used if special requirements exist for the location of meteorological instruments.  Follow the preparation instructions for Format 1000.

REQUIREMENT:
If necessary to clarify requirements, provide diagrams indicating the location of special instrumentation.


## FORMAT 3250 - SPACE ENVIRONMENT METEOROLOGY

This format is used to indicate the requesting agency's requirements for space environmental support.  The statement of requirements should be specific.  Follow the preparation instructions for Format 1000.

STATION:
Enter the location where support is required.

PERIOD:
Give the from-to period required.

OBSERVATIONS OR FORECASTS REQUIRED:
State requirements in specific terms.  Support available consists of:

Observations (specify real time or post analysis) of solar flares, geomagnetic indices, solar radio flux (specify frequency), solar wind velocity, ionospheric electron density (specify location and altitudes), energetic particles (specify type and energy range),

ionograms from range stations (specify rate at which 35mm negative should be taken), and ionospheric radio propagation conditions (vertical and oblique incidence sounder observations).

Forecasts of solar flares (indicate importance class), proton events, geomagnetic indices, 10 cm solar radio flux, ionospheric electron density (specify location), and ionospheric radio propagation conditions (specify circuits, paths, or trunks).

DATA PRIORITY:
Indicate whether the data requirement is mandatory (M), required (R), or desired (D). See chapter 3 for further explanation of priority.

PURPOSE AND REMARKS:
State the purpose of the requirement.  If real time observations or "quick-look" reports are required, give the position title and operational telephone number of the recipient.


## FORMAT 3300 - **RECOVERY**

This format is used to enter general information concerning requirements, flight plans, operations, and procedures, pertaining to recovery of personnel and equipment. For aircraft type programs, this UDS section may also include landing operations support information and requirements.  Follow the preparation instructions for Format 1000.

REQUIREMENT ( )  INFORMATION ( ):
Indicate whether each item number submitted is a requirement for support from the support agency or is submitted for informational purposes only.  Enter general information concerning requirements necessary to support recovery operations. General requirements such as recovery areas, salvage and disposition, written reports, handling equipment, drawings, and general communications should be included on this Format.  Detailed communications requirements, for example, type of transmission format, source, and destinations must be defined in the communications section of this document.


## FORMAT 3310 - **RECOVERY - SHIPS AND AIRCRAFT COVERAGE**

This format is used to list locations and access times of recovery.  Follow the preparation instructions for Format 1000.

AREA CODE:
Enter the area code or designation.

NUMBER AND TYPE OF SHIPS:

List the number and type of ships required for recovery in areas designated in AREA CODE.

SHIP ACCESS TIME (HRS):
Enter the total time (in hours) from notification of the landing point to the time when the ship will arrive at the recovery point and the recovery effort is started.

NUMBER AND TYPE RESCUE AIRCRAFT:
List the number and type of aircraft needed for adequate recovery coverage in the area designated in AREA CODE entry.

AIRCRAFT ACCESS TIME (HRS):
Enter the total time (in hours) from notification of the landing point to the time when the aircraft will arrive at the recovery point and the recovery effort is started.

REMARKS:
Enter any remarks necessary to clarify entries made.


## FORMAT 3320 - RECOVERY - ITEMS TO BE RECOVERED

This format is used to specify and describe items which must be recovered including flight hardware, reentry vehicle, spacecraft, and underwater items. Handling procedures for equipment requiring special fixtures, jigs, and tools should be provided to the recovery agencies in accordance with applicable regulations. Follow the preparation instructions for Format 1000.

NOMENCLATURE:
Enter the name or nomenclature of the item to be recovered.

WEIGHT (LBS):
Enter the weight of the item in pounds.

DIMENSIONS (FT):
Enter the overall length, width, and the largest diameter, if applicable.

LIFE FORM/HAZARDS:
If applicable, indicate the type of life forms (human, primate, or spores) contained in the recoverable item.  Identify any object which is classified or which is potentially dangerous to recovery personnel, for example, ordnance and hypergolic items, pressurized vessels, and toxic materials.

REMARKS:
Enter additional information, sequence of events, and recovery aids which will aid in the identification and recovery of the specified item.


## FORMAT 3330 - RECOVERY - SALVAGE AND DISPOSITION

This format is used to identify and describe components which may have to be salvaged and disposed of in case of inadvertent impact on land or in water.  Follow the preparation instructions for Format 1000.

NOMENCLATURE:
Enter the name or designation of the component to be salvaged or disposed of.

WEIGHT (LBS):
Enter the weight of the component in pounds.

LOCATION:
Enter the location of the component in the vehicle such as first stage engine section and nose cone.

DESCRIPTION:
Give a brief description of the component including such items as length, width, and shape.  If drawings are available, enter title and number.

REMARKS:
Enter the purpose of the salvage action, the disposition of the salvaged component, and any special handling instructions.  Identify each object which is classified or which is potentially dangerous to recovery personnel.


## FORMAT 3340 - RECOVERY - PLANNED AREAS

This format is used to list requirements for planned areas of recovery.  Follow the preparation instructions for Format 1000.

AREA CODE:
Enter the recovery area code or designation.

POSITION
Enter the latitude and longitude of the area.

LANDING AREA SIZE:
Enter the lengths of the major and minor axes of each area in nautical miles.

LAUNCH AZIMUTH:
Enter the launch azimuth for the mission involved.

REVOLUTION NUMBER:
Enter the revolution number.

ITEMS TO BE RECOVERED:
Enter the names of the items of flight hardware to be recovered.

REMARKS:
Enter any remarks necessary to clarify entries made.


## FORMAT 3350 - RECOVERY - CONTINGENCY AREAS

This format is used to list requirements for recovery contingency areas.  Follow the preparation instructions for Format 1000.

AREA CODE:
Enter the recovery area code or designation.

POSITION:
Enter the latitude and longitude of the area.

LANDING AREA SIZE:
Enter the lengths of the major and minor axes of each area in nautical miles.

LAUNCH AZIMUTH:
Enter the launch azimuth for the mission involved.

REVOLUTION NUMBER:
Enter the revolution number.

ITEMS TO BE RECOVERED:
Enter the names of the items of flight hardware to be recovered.

REMARKS:
Enter any remarks necessary to clarify entries made.


## FORMAT 3360 - RECOVERY - ABORT AREAS

This format is used for listing all recovery areas necessary for aborts.  Follow the preparation instructions for Format 1000.

AREA CODE:
Enter the recovery area code or designation.

LOCATION OF AREA:
Enter the location of area designated in area code entry.

AREA SIZE:
Enter the lengths of the major and minor axes in nautical miles.

POSITION:
Enter the latitude and longitude of the area.

REMARKS:
Enter any remarks necessary to clarify entries made.


## FORMAT 3400 - OTHER TECHNICAL SUPPORT

This format is used by the requesting agency to specify general support requirements that are not included in the other UDS technical sections.  Follow the preparation instructions for Format 1000.

REQUIREMENT ( )  INFORMATION ( ):
Indicate whether each item number submitted is a requirement for support from the support agency or is submitted for informational purposes only.  Define general technical support requirements not previously covered in this document.


## FORMAT 3410 - OTHER TECHNICAL SUPPORT - AIRCRAFT

This format is used to list requirements for aircraft.  Aircraft needs for airborne instrumentation tests, drop tests, and user provided equipment should be listed here. This format may also be used to list aircraft recommended to support airborne telemetry, frequency protection, and optics.  These data or service requirements must also have been requested in the appropriate UDS section.  Follow the preparation instructions for Format 1000.  AIRCRAFT SOURCE RA ( ) SA ( ):  Indicate whether the aircraft will be furnished by the requesting agency (RA) or support agency (SA).

FUNCTION/REQUIREMENT:
Enter the function the aircraft will perform such as airborne instrumentation (give type), escort, photo, and administrative.  State the aircraft support required (transient services, communications).

EQUIPMENT TO BE INSTALLED IN AIRCRAFT:
Enter the specialized equipment to be installed in the aircraft.  Indicate who will
perform the installation and maintenance and who will furnish this equipment.  Give
an estimate of the time needed to install and to remove each item of equipment.  For
example, a piece of special telemetry equipment furnished, maintained, and installed
by XX Company is needed and it takes 20 hours to install and 5 hours to remove.

NUMBER OF AIRCRAFT:
Enter the number of aircraft required, per quarter, to support the function and
purpose.

NUMBER OF FLIGHTS:
Enter the number of flights (per quarter) anticipated per aircraft.

FLIGHT HOURS/TEST:
Enter the maximum flight duration in hours that will be required for an average single
test.  Flight time should include time flown prior to T-time, estimated hold time, and
post-test vehicle or missile time, as applicable.  Times should be based on desired
aircraft speed.

TOTAL FLYING HRS/QTR:
Enter the total flying hours.

STATION:
Enter the stations, centers, or range station numbers involved.

FLIGHT PATH:
If the flight path encompasses many stations, list the range stations such as 3-7.  If the
stations involved vary during the test period, indicate such for each quarter.  If the
flight path is more involved, enter narrative description in REMARKS.

SPEED RANGE (KTS):
Enter minimum and maximum speeds acceptable in knots.

ALTITUDE:
Enter minimum and maximum altitudes acceptable (1000-foot increments or
equivalent metric unit).

REMARKS:
Use this entry to clarify or explain any information stated elsewhere.  Include the
aircraft type and identification number, if known.  Indicate whether the support agency
can or cannot use the aircraft for other missions between tests.

## FORMAT 3411 - OTHER TECHNICAL SUPPORT - SEACRAFT

This format is used to list requirements for seacraft.  Seacraft needs for shipborne instrumentation test, set-out tests, and user installed equipment should be listed here.  This format may also be used to recommend the seacraft to support shipborne telemetry, radar measurements, and recovery.  These data or service requirements must also have been requested in the appropriate UDS section.  Follow the preparation instructions for Format 1000.

TYPE AND FUNCTION:
Enter the type of ship or boat required and the function it will perform.

SEACRAFT SOURCE RA ( ) SA ( ):
Designate whether the ship is furnished by the requesting agency (RA) or support agency (SA).

NUMBER OF OPERATIONS:
Enter the number of operations in the space provided and the estimated total time, in hours, the ship or boat will be required on station for the calendar periods indicated.

OPERATING AREA:
Enter the geographical coordinates of the approximate on-station position desired or the area in which the ship's operations are to be conducted.

BEARING (TRUE):
Enter the true bearing of the ship or boat operation.

SPEED:
Enter the speed requirements of the ship or boat in knots during the support operations.

DESCRIPTION OF OPERATIONS:
Enter a brief description of a typical operation to be supported.

SUPPORT REQUIRED:
Describe the support required.  Enter all nonstandard equipment that must be installed and indicate if any of the support agency will be expected to furnish, install, or maintain.


## FORMAT 3412 - OTHER TECHNICAL SUPPORT - TARGETS

This format is used to list target requirements.  Do not use this format to list requirements for splash. Follow the preparation instructions for Format 1000.

TARGET CODE DESIGNATION, NAME, AND REFERENCE:

Indicate the target's code designation and common name.  Also, give references which will describe the target.

TYPE OF TARGET:
State the type of moving target, indicating its environment (land, sea, air, space, underwater).

SOURCE:
Indicate whether the target is to be furnished by the requesting agency (RA) or the support agency (SA).

SECURITY CLASSIFICATION:
Enter the highest security classification of the target.

TARGET PERFORMANCE PARAMETERS:
Indicate the magnitude of the various parameters listed.  Additional parameters may be added if appropriate.

AIR CONTROL REQUIREMENTS:
Complete the outlined description.

NAME OF EQUIPMENT:
List the equipment (both target and nontarget borne) needs for target requirements.

AGENCY RA ()  SA ():
Indicate whether listed equipment will be furnished by the requesting agency (RA) or the support agency (SA).

DESCRIPTION OF EQUIPMENT:
Briefly describe important properties of the equipment to be used.

PURPOSE:
Indicate the purpose of the equipment.

SUPPORT SERVICES AND SPECIAL REQUIREMENTS:
List support services such as Automatic Ground Control Landing (AGCL).  Operational or similar systems must be described in the event a user would be authorized to provide their own target operations.

## FORMAT 3420 - **SUMMARY OF FREQUENCY PROTECTION**

This format is used to present a list of all frequencies which require frequency protection and is not to be considered a request for frequency allocation.  Requests for frequency allocation will be submitted according to support agency directives.  Follow the preparation instructions for Format 1000.

FREQUENCY:
Enter the frequency in megahertz or kilohertz.

RELATED REFERENCE UDS FORMAT/ITEM NUMBER:
Enter references to the document's related UDS format that describe the equipment to be used.

EMISSION CHARACTERISTICS:
Enter the type of emission (AM, FM, CW, pulse), bandwidth in kHz, and power output (average and/or peak).  Use current World Administrative Radio Conference (WARC) bandwidth and emission designators.

PURPOSE/LOCATION:
Enter the purpose for which the frequency is required (air/ground voice, air/ground telemetry, point-to-point, voice, telemetry receivers).  List the location of the referenced equipment.

PROTECTION REQUIRED:
Enter the desired guard band such as 500 kHz.

ESTIMATED TIME OF USE:
Enter the estimated range time in hours per test that the frequency will be used.  Open loop tests performed at times other than during the operation include the time the radiation begins (normally during countdown to splash), stage separation, and injection, whichever is applicable.

SPECIAL MONITORING REQUESTS:
Enter other related reference UDS Sections and item numbers which explain special monitoring requirements in detail.


## FORMAT 3421 - **PROTECTION FROM EMITTING SYSTEMS**

This format is used to identify and to list the radiation limits which may be hazardous to requesting agency test articles, vehicles, equipment, or payloads.  Provide the radiation levels at the equipment or container envelope at each facility occupied and during the interfacility movements.  Include maximum permissible levels.  Follow the preparation instructions for Format 1000.

FREQUENCY:
Enter the frequency in megahertz, gigahertz, or angstroms.

LOCATION:
Enter location that requires protection such as building or area identity, or vehicle and area if in movement.

PROTECTION REQUIRED:
Enter maximum permissible levels allowable.  Describe the term of reference and the units of measurement.

ESTIMATED DURATION OF PROTECTION:
Enter the beginning and ending times protection is required.  Enter whether powered or unpowered, containered or uncontainered.

OTHER:
Provide any additional information that may be required to clarify the protection requirement.


## FORMAT 3430 - GEODETIC AND GRAVITATIONAL DATA

This format is used to identify geodetic and gravitational data required for the program or to identify parameter accuracy requirements which exceed current accuracy levels.  The geodetic and gravitational parameters for specific launch sites, sensors, and targeted impact points are available to any qualified requesting agency.  The support agency Geodetic Project Officer or the responsible geodetic agency will  distribute the requisite published geodetic data to the requesting agency for each facility or group of facilities identified for use in support of the program in the Statement of Capability. The requesting agency will then analyze the geodetic data to determine its adequacy in connection with program objectives.

In general, the presently available parameter accuracies represent the current state-of-the-art.  If the requesting agency identifies accuracy requirements significantly beyond  the state-of-the-art (available data), the basis of these requirements must be documented.  Such documentation, if required, will be requested of the requesting agency by the support agency after reviewing the requirements document.

If this format is not completed by the requesting agency, it will signify that the launch site, sensor, and targeted impact point data, as specified by the support agency, are adequate to meet program requirements.  Follow the preparation instructions for Format 1000.

FACILITY DESCRIPTION AND LOCATION:

Identify each facility (launcher, sensor, impact point, or support facility) and its location, if known.

HORIZONTAL DATA, VERTICAL DATA, GRAVITY:
List the maximum allowable standard deviation uncertainties (accuracy = 1 sigma) for launch facilities, sensors, target points, and support facilities for which geodetic and gravitational data requirements have been identified.

All entries should be filled in. If the parameter is not required, so state in that entry. If the parameter is required but there is no accuracy statement necessary, so indicate in that entry.

REMARKS AND SPECIAL REQUIREMENTS:
Enter any remarks as necessary. List any special geodetic and gravitational requirements not provided for above. Enter special instructions such as data reference points on particular instrumentation, special data card issuance or address, special accuracy statement clarification, or any special requirements related to the data.


## FORMAT 3440 - OTHER TECHNICAL SUPPORT - TRAINING

This format is used to describe special training or briefing requirements for requesting agency personnel in support of program, mission, or test operations. Community presentations and education are covered on Format 5313, Services - Public Affairs. Follow the preparation instructions for Format 1000.

LOCATION:
Enter the location where the training is to be accomplished.

NUMBER:
Enter the number of personnel to be trained at the location stated under LOCATION.

TYPE/SPECIALTY:
Enter the type of training required. Give training course numbers or specialty codes, if known.

DATE/DURATION:
Define the period of time personnel will be available for the training courses requested.

PURPOSE/REMARKS:
Describe the training required and state any equipment or training aids that may be required. If housing, messing, and other base support services are required for the personnel specified under NUMBER entry, appropriate information must be entered in the Personnel Assignment Schedules, UDS Format 5100 series.

**FORMAT 3500 - MODELING AND SIMULATION**

This format is used by the requesting agency to list general modeling and simulation requirements.  Follow the preparation instructions for Format 1000.

REQUIREMENT:
Briefly list and describe those areas requiring modeling and simulation support.

PURPOSE:
Briefly describe the purpose of the support requirements, relating them to the overall program.

INFORMATION:
Provide, as necessary, information of a general nature concerning the types of modeling and simulation tools required and which will aid the support agency in supporting the program/mission.  Types of modeling and simulation tools include but are not limited to:

Advanced Distributed Simulation (ADS) - An environment in which simulations are linked to produce large synthetic environments within which large numbers of subjects can interact in real time.

Computational Fluid Dynamics (CFD) - A numerical approach for modeling the dynamics of a fluid flow in and around solid objects.

Simulators - This is the family of equipment used to represent threat weapon systems in testing and training.  A threat simulator has one or more characteristics which, when detected by human senses or man-made sensors, provide the appearance of an actual threat weapon system within a known degree of realism.  It is also a human-in-the-loop device that provides the conditions and environment of a system to accurately produce aspects of the systems performance and operation to conduct training and develop tactics.

Stimulators - A simulation used to provide an external stimulus to a system or subsystem.

Hardware/Software In the Loop (HWIL/SWIL) - A hybrid simulation that includes actual system (prototype or production) hardware or software in conjuntion with digital models and external stimuli to demonstrate the operations and functions of the hardware/software within an environment simulating actual operating conditions.
System/Software Integration Laboratory (SILL) - A facility that supports the integration of system components and software in a laboratory environment for development, experiments, and testing.

Installed System Test Facilities (ISTF) - Facilities where entire systems or sub-systems get their first workout in the environment in which they will operate.


## FORMAT 3510 - MODELING AND SIMULATION PLAN

This format is used to list the general modeling and simulation plan requirements. Follow the preparation instructions for Format 1000.

LOCATION:
Enter the location where the modeling and simulation is to be accomplished.

NUMBER:
Enter the number of simulations required at the location stated under LOCATION.

TYPE/SPECIALTY:
Enter the type of modeling or simulation required.

FIDELITY:
List the types of inputs and outputs required for the model as well as their accuracy requirements.

VERIFICATION, VALIDATION, AND ACCREDITATION (VV&A):
Describe the method in which VV&A is to be conducted on the models and simulations.

DATE/DURATION:
Define the period of time that the modeling or simulation will be required.

PURPOSE/REMARKS:
Describe any special training and list special equipment that may be required.


## FORMAT 3520 - MODELING AND SIMULATION ARCHITECTURE

This format is used to list general Modeling and Simulation architecture requirements.  Follow the preparation instructions for Format 1000.

INFORMATION:
Provide information on the interface between different simulations or between simulations and the live portions of the test.

## FORMAT 4100 - DATA PROCESSING SPECIFICATIONS

This format is used to list general data processing requirements.  Disposition of the data will be listed in the Format 4200 series, Data Disposition.  Follow the preparation instructions for Format 1000.

REQUIREMENT ( )  INFORMATION ( ):
Indicate whether each item number submitted is a requirement for support from the support agency or is submitted for informational purposes only.  Enter the requirements for data computer processing.


## FORMAT 4110 - DATA PROCESSING SPECIFICATIONS - DETAIL

This format is used to list general data processing requirements.  The disposition of these data will be listed in the Format 4200 series, Data Disposition.  Follow the preparation instructions for Format 1000.

DATA DESCRIPTION:
Enter the type of data to be processed.

SECURITY CLASSIFICATION:
Enter the security classification of the data.

PROCESSING TIME:
Enter the time (Zulu or flight time) to begin (FROM) and stop (TO) processing.

DATA SAMPLE RATE:
Enter the rate at which the data will be sampled and stored on magnetic tape or disk.

DATA PLOT OR PRINT RATE:
Enter the rate at which the data will be taken from the sampled data, plotter, or printer.

REFERENCE:
Enter the UDS format number and requirement item where the requirement is listed.  List the agency designator with the requirement item number portion of the entry.

TYPE PRESENTATION:
Enter the type of presentation of the data (magnetic tape, film plot, hard-copy plot, and printout).

DATA FORMAT - GENERAL INSTRUCTIONS:
Enter all special data formats for general instructions which are needed to further define the specifications of the processed data.


## FORMAT 4120 - DATA PROCESSING - OTHER

This format is used to describe derivative or special handling of measurement data not readily or adequately defined on requirement formats. Follow the preparation instructions for Format 1000.

DATA:
Enter the data for which the special processing is required.

REFERENCE:
Enter the UDS format number and requirement item number where the data collection requirement appears.

TIME INTERVAL:
Enter the time interval between consecutive prints on which data are required.

TIME REQUIRED:
Indicate the number of hours (H), days (D), or workdays (WD) after the test (T-0) that the data are required.

DATA PRESENTATION AND REMARKS:
Describe the special data processing/presentation required such as special formats in tabular data, graphical data, and magnetic tapes. For other than standard presentations, a complete description should be furnished. (Deviations from normal presentations will require lead time for computer programming and cause longer elapsed time because of special handling.)


## FORMAT 4130 - DATA COORDINATE SYSTEMS DESCRIPTION

This format is used to describe in detail the data coordinate systems required. Follow the preparation instructions for Format 1000.

REQUIREMENT ( )  INFORMATION ( ):
Indicate whether each item number submitted is a requirement for support from the support agency or is submitted for informational purposes only. Enter the rectangular or curvilinear coordinate systems required and give the origin and orientation of the major axes. If origin is defined with respect to an event, give an alternate for use if the designated event does not occur or is not identified in data records.

## FORMAT 4200 - DATA DISPOSITION

This format is used to list the general requirements for disposition of test evaluation data which have been established in the document.  Follow the preparation instructions for Format 1000.

REQUIREMENT ( )  INFORMATION ( ):
Indicate whether each item number submitted is a requirement for support from the support agency or is submitted for informational purposes only.  Enter a description of test evaluation data disposition requirements.  Ensure the complete address of the data recipient is included on this UDS format.

DATA TYPE:
Enter the type of data to be handled using standard data nomenclature when applicable.

REFERENCE:
Enter the UDS format number and requirement item number where the data acquisition requirements are listed elsewhere in this document.  All data items required must have a reference.

DISTRIBUTION:
Enter the organization and code of the office assigned as the central distribution point for the data.  This office must be contacted if problems rise in data distribution.

QUANTITY:
Enter the number of original data records required.  If more than one original is needed, explain the need under the REMARKS entry.  Enter the number of prints needed.

RECIPIENT:
Enter the name and code of the person and organization originating the request, followed by the agency code in parentheses.  This agency or person will receive the data from the distributor listed in distribution entry.  Include the complete abbreviated address of the data recipients.

TIME REQUIRED:
Enter the time in hours (up to 24 hours) and in days as indicated below.  This is the time required for receipt of the data by the recipient.

H - meaning consecutive hours from T-0.

WD - meaning workdays from T-0; Saturday, Sunday and holidays are not included in these time periods.

CD - meaning calendar days from T-0; Saturday, Sunday and holidays are included in this processing time.

W/A - meaning when the data are available.

EOM+___ - (enter number of days) meaning the number of days from mission termination (end of mission) when the data are required.

SD+___ - (enter number of days) meaning the number of days after the ship on which the data were generated has returned to port.

AOV - meaning after arrival of vehicle.

EOS+___ - (enter number of days) meaning the number of days after the end of support.

E+___ - (enter number of days) meaning the number of days after the event.

R+___ - (enter number of days) meaning the number of days after receipt of the material.

REMARKS:
Enter any remarks necessary to clarify entries made.


## FORMAT 4210 - DATA DISPOSITION - DATA AVAILABILITY

This format is used by the support agency to indicate the availability of data to be provided by specific stations.  It is not in response to a requesting agency generated requirement and is for support agency option use.  Follow the preparation instructions for Format 1000.

STATION DESIGNATION:
Enter the station designator.

SYSTEM:
Enter the name of the system and type of data available from the station listed (C-band radar, digital magnetic tape).

REMARKS:
Include any remarks that will further explain the above entries.

**FORMAT 4220 - DATA DISPOSITION - REPORTS**

This format is used for specifying requirements for the reproduction and distribution of test data reports resulting from requirements stated on formats in the document.  These reports include, but are not limited to, tape recordings, photographic records, survey data, meteorological reports, telemetry records, and trajectory data.  Follow the preparation instructions for Format 1000.

TYPE REPORT:
Enter the type of report required such as quick-look, preliminary, or final.  Quick-look or preliminary reports will be presented prior to the final data in either tabular or graphical form.  Only that data which will be incorporated at a later time should be included in this category.  Final report data constitute the end product required by the range user or other agencies.  These data are to be processed or reduced in a manner prescribed on previous formats.

TIME REQUIRED:
Enter the time in minutes, hours, days, or workdays after the test that the data are required.

QUANTITY:
Enter the number of reports required.

DATA TYPE:
Enter the type data such as metric and telemetry.

REFERENCE:
Enter the UDS format number and requirement item number where the acquisition requirements are listed elsewhere in the document.  All data items required must have a reference.

RECIPIENT:
Enter the name and code of the person and organization which originated the request, followed by the agency code.

REQUIRED FORMAT:
Enter any special requirements for the organization or presentation of the report.


**FORMAT 4230 - DATA DISPOSITION - DETAIL - METRIC/SIGNATURE**

This format is used to list the disposition of metric tracking data other than real time.  The requirements have been established elsewhere in the document.  This format may be divided into specific subsections for particular programs.  These subsections may be broken down by mission phase (prelaunch, launch, midcourse, orbital and

space, terminal, and signature).  The organization of this format must be consistent with the data breakout where the requirement was established in the document. Follow the preparation instructions for Format 1000.

DATA TYPE:
Follow the preparation instructions for Format 4200.


## FORMAT 4231 - DATA DISPOSITION - DETAIL - TELEMETRY

This format is used to list the disposition of telemetry data other than real time. The requirements have been established elsewhere in the document.  This format may be divided into specific subsections for particular programs.  These subsections may be broken down by mission phase (prelaunch, launch, midcourse, orbital and space, terminal, and signature).  The organization of this format must be consistent with the data breakout where the requirement was established in the document.  Follow the preparation instructions for Format 1000.

DATA TYPE:
Follow the preparation instructions for Format 4200.


## FORMAT 4232 - DATA DISPOSITION - DETAIL - VOICE/TV RECORDING

This format is used to list the disposition of voice/TV recording data other than real time.  The requirements have been established elsewhere in the document.  This format may be divided into specific subsections for particular programs.  These subsections may be broken down by mission phase (prelaunch, launch, midcourse, orbital and space, terminal, and signature).  The organization of this format must be consistent with the data breakout where the requirement was established in the document.  Follow the preparation instructions for Format 1000.

DATA TYPE:
Follow the preparation instructions for Format 4200.


## FORMAT 4233 - DATA DISPOSITION - DETAIL - PHOTOGRAPHIC

This format is used to list the disposition of photographic data.  The requirements have been established elsewhere in the document.  This format may be divided into specific subsections for particular programs.  These subsections may be broken down by mission phase (prelaunch, launch, midcourse, orbital and space, terminal, and signature).  The organization of this format must be consistent with the data breakout where the requirement was established in the document.  Follow the preparation instructions for Format 1000.

DATA TYPE:
Follow the preparation instructions for Format 4200.


## FORMAT 4234 - DATA DISPOSITION - DETAIL - METEOROLOGICAL

This format is used to list the disposition of meteorological data other than real time.  The requirements have been established elsewhere in the document.  This format may be divided into specific subsections for particular programs.  These subsections may be broken down by mission phase (prelaunch, launch, midcourse, orbital and space, terminal, and signature).  The organization of this format must be consistent with the data breakout where the requirement was established in the document.  Follow the preparation instructions for Format 1000.

DATA TYPE:
Follow the preparation instructions for Format 4200.


## FORMAT 4235 - DATA DISPOSITION - DETAIL - COMPUTER PROCESSING

This format is used to list the disposition of computer processing data other than real time.  The requirements have been established elsewhere in the document.  This format may be divided into specific subsections for particular programs.  These subsections may be broken down by mission phase (prelaunch, launch, midcourse, orbital and space, terminal, and signature).  The organization of this format must be consistent with the data breakout where the requirement was established in the document.  Follow the preparation instructions for Format 1000.

DATA TYPE:
Follow the preparation instructions for Format 4200.


## FORMAT 4236 - DATA DISPOSITION - DETAIL - MISCELLANEOUS

This format is used to list the disposition of miscellaneous data other than real time.  The requirements have been established elsewhere in the document.  This format may be divided into specific subsections for particular programs.  These subsections may be broken down by mission phase (prelaunch, launch, midcourse, orbital and space, terminal, and signature).  The organization of this format must be consistent with the data breakout where the requirement was established in the document.  Follow the preparation instructions for Format 1000.

DATA TYPE:
Follow the preparation instructions for Format 4200.

**FORMAT 4240 - DATA DISPOSITION - ENVIRONMENTAL**

This format is used to list the disposition of environmental data other than real time. The requirements for which have been established elsewhere in the document. This format may be divided into specific subsection, as required, for particular programs. These subsections may be broken down by mission phase (prelaunch, launch, midcourse, orbital and space, terminal, and signature). The organization of this format must be consistent with the data breakout where the requirement was established in the document. Follow the preparation instructions for Format 1000.

DATA TYPE:
Follow the preparation instructions for Format 4200.


**FORMAT 5000 - BASE FACILITIES/LOGISTICS**

This format is used by the requesting agency to request base facilities and logistics support. Follow the preparation instructions for Format 1000.

REQUIREMENT ( ) INFORMATION ( ):
Indicate whether each item number submitted is a requirement for support from the support agency or is submitted for informational purposes only. Outline the general requirements and requesting agency concept of support required to include the extent of general support facilities and logistics. Also, overall personnel assignment schedules, transportation types, all types of services, laboratories, maintenance, and any support not covered by UDS Format 5000 series may be listed.


**FORMAT 5100 - PERSONNEL ASSIGNMENT SCHEDULES**

This format is used to show categorized requesting agency personnel deployment requirements in connection with the program. This information is required to allow planning for housing, messing, medical care, recreation, and other general or base support services for personnel assigned to or meeting at the various locations. Follow the preparation instructions for Format 1000.

LOCATION:
Enter the location within the agency (or other locations) where personnel will be assigned or will visit. See following instructions concerning workers living in one area and commuting to another for work.

PERSONNEL CATEGORY (YEAR 1):
The various categories of personnel that may be assigned in connection with the test program are listed under this entry. If other categories are applicable, appropriate

substitutions or additions can be made.  Enter in the appropriate CY entries, by months, the number of personnel assigned to the location shown under LOCATION entry.  In cases where personnel live at one location and commute daily to another for duty, enter an asterisk or other designator under the TOTAL line.  Also enter clarifying notes under REMARKS entry showing the work locations and number of personnel commuting to and from the location shown.

TOTAL:
Enter the total personnel deployment for each month.

REMARKS:
Provide additional information which may affect planning such as requirements relating to special personnel accommodations, commuters, and dependents.  Enter number of school age dependents in kindergarten, grade, and high school.

PERSONNEL CATEGORY (ADDITIONAL YEARS):
The various categories of personnel that may be assigned in connection with the test program are listed under this entry.  If other categories are applicable, appropriate substitutions or additions can be made.  Enter in the appropriate CY entries, by quarters, the number of personnel assigned to the location shown under LOCATION entry.  In cases where personnel live at one location and commute daily to another for duty, enter an asterisk or other designator under TOTAL line.  Also, enter clarifying notes under REMARKS entry showing the work locations and number of personnel commuting to and from the location shown.

TOTAL:
Enter the total personnel deployment for each quarter.

REMARKS:
Provide additional information which may affect planning such as requirements relating to special personnel accommodations, commuters, and dependents.  Enter number of school age dependents in kindergarten, grade, and high school.


**FORMAT 5200 - TRANSPORTATION**

This format is used by the requesting agency to specify general transportation requirements.  Specific requirements and schedules are contained in the Format 5200 series.  Follow the preparation instructions for Format 1000.

REQUIREMENT ( )  INFORMATION ( ):
Indicate whether each item number submitted is a requirement for support from the support agency or is submitted for informational purposes only.  Define the general transportation requirements.

**FORMAT 5210 - GROUND TRANSPORTATION**

This format is used to list all requesting agency surface transportation requirements for personnel and cargo between (or to) the various stations or sites. Should the requesting agency desire to provide part or all of its own transportation, this notation should be shown as requesting agency provided; in which case, any materials handling or other requirements to be placed on the support agency shall be specified. These requirements should cover the period of the program and reflect only those requirements in direct support of the program. Personnel and cargo load will be entered as separate items even if the LOCATION entry is identical. Follow the preparation instructions for Format 1000.

TRIP FREQUENCY/QTR:
Enter the number of trips anticipated per quarter.

LOCATION:
Enter the name or number of the station, base, or center where the personnel and cargo will be transported from and to.

LOAD:
If the load is personnel, enter an "X" in the PERSONNEL entry. If the load is cargo, enter "S/T" (short tons) in CARGO entry for on land or "M/T" (measurement tons) for ship cargo or pounds in the exponential value of "LBS $X^{10}$."

NUMBER OF PASSENGERS AND QTY OF CARGO/QTR:
Enter the number of passengers and quantity of cargo to be transported per quarter for the year indicated. If the number or quantity is dependent on the test schedule, enter the value per test and type the notation "per test" after the value entered.

REMARKS:
Enter any remarks necessary to clarify entries made.


**FORMAT 5220 - AIR TRANSPORTATION**

This format is used to list all requesting agency air transportation requirements of personnel and cargo between (or to) the various stations or sites. Should the requesting agency desire to provide part or all of its own transportation, this notation should be shown as requesting agency provided. In such cases, any materials handling or other requirements to be placed on the support agency shall be specified. These requirements should cover the period of the program and reflect only those requirements in direct support of the program. Personnel and cargo load will be entered as separate items even if the LOCATION entry is identical. Follow the preparation instructions for Format 1000.

TRIP FREQUENCY/QTR:
Enter the number of trips anticipated per quarter.

LOCATION:
Enter the name or number of the station, base, or center where the personnel and cargo will be transported from and to.

LOAD:
If the load is personnel, enter an "X" in the PERSONNEL entry.  If the load is cargo, enter the exponential value in "LBS $X^{10}$ in the CARGO entry.

NUMBER OF PASSENGERS AND QTY OF CARGO/QTR:
Enter the number of passengers and quantity of cargo to be transported per quarter for year indicated. If the number or quantity is dependent on the test schedule, enter the value per test and provide the notation "per test" after the value entered.

REMARKS:
Enter any remarks necessary to clarify entries made.

## FORMAT 5230 - SEA TRANSPORTATION

This format is used to list all requesting agency sea transportation requirements of personnel and cargo between (or to) the various stations or sites.  Should the requesting agency desire to provide part or all of its own transportation, this notation should be shown as requesting agency provided.  In such cases, any materials handling or other requirements to be placed on the support agency shall be specified.  These requirements should cover the period of the program and reflect only those requirements in direct support of the program.  Personnel and cargo load will be entered as separate items even if the LOCATION entry is identical.  Follow the preparation instructions for Format 1000.

TRIP FREQUENCY/QTR:
Enter the number of trips anticipated per quarter.

LOCATION:
Enter the name or number of the station, base, or center where the personnel and cargo will be transported from and to.

LOAD:
If the load is personnel, enter an "X" in the PERSONNEL entry.  If the load is cargo, enter the exponential value in "LBS $X^{10}$ in the CARGO entry.

NUMBER OF PASSENGERS AND QTY OF CARGO/QTR:
Enter the number of passengers and quantity of cargo to be transported per quarter for year indicated.  If the number or quantity is dependent on the test schedule, enter the value per test and provide the notation "per test" after the value entered.

REMARKS:
Enter any remarks necessary to clarify entries made.


## FORMAT 5300 - SERVICES

This format is used by the requesting agency to list requirements for services not covered elsewhere in the document.  This format is used to establish general and specific services.  Miscellaneous and other services not covered in succeeding sections should also be identified here.  See the Format 5300 series for guidelines regarding specific services.  Follow the preparation instructions for Format 1000.

REQUIREMENT ( )  INFORMATION ( ):
Indicate whether each item number submitted is a requirement for support from the support agency or is submitted for informational purposes only.  Define the general services requirements.  Specific services requested must include the following information:  amounts (number of persons, pounds, tons, gallons, or square feet as applicable) for each requirement item for the period it is required.  Specify dates (month and year) for the item or service required.  When applicable, enter the name of the contractors and contract numbers for which this service/support is required.


## FORMAT 5310 - SERVICES - ADMINISTRATIVE, PERSONNEL, AND OFFICE

This format is used by the requesting agency to list requirements for administrative, personnel, and office support and services.  Services requested on this format are

| | |
|---|---|
| Personnel services | Equipment |
| Personnel records | Central mail and files |
| Orders/transportation request | Postal/mail distribution |
| Office services | Reproduction |
| Word processing | Library |
| Supplies | Office space and furniture |

Follow the preparation instructions for Format 1000.

TYPE ITEM/SERVICE:
Indicate the required item or service.

RA ( )  SA ( ):
Indicate whether the item or service entered in the previous entry shall be requesting agency (RA) or support agency (SA) furnished.

DATES OF REQUIRED ITEM/SERVICE:
Enter dates (month and year) for the item or service required.

AMOUNTS OF REQUIRED ITEM/SERVICE:
Enter the amount for each item/service required as applicable.

PURPOSE AND REMARKS/SPECIAL INSTRUCTIONS:
State briefly the need for service requested and include any clarifying remarks which specifically describe the item and amounts shown in previous entries.  Should the required service need special instructions, enter these instructions in this entry.  When applicable, enter the name of the contractors and contract numbers for which this service/support is required.


## FORMAT 5311 - SERVICES - FIRE AND RESCUE

This format is used by the requesting agency to list requirements for fire protection and personnel rescue services.  Services requested on this format are fire protection/fire suppression, personnel rescue and recovery, structural crew, crash crew, search and rescue crew, load crew, personnel protective equipment, and special equipment

Follow the preparation instructions for Format 1000.

TYPE ITEM/SERVICE:
Indicate the required item or service.

RA ( )  SA ( ):
Indicate whether the item or service entered in the above entry shall be requesting agency (RA) or support agency (SA) furnished.

DATES OF REQUIRED ITEM/SERVICE:
Enter dates (month and year) for the item or service required.

AMOUNTS OF REQUIRED ITEM/SERVICE:
Enter the amount for each item/service required as applicable.

PURPOSE AND REMARKS/SPECIAL INSTRUCTIONS:
State briefly the need for service requested and include any clarifying remarks which specifically describe the item and amounts shown in entries above.  Should the required service need special instructions, enter these instructions in this entry.  When

applicable, enter the name of the contractors and contract numbers for which this service/support is required.

## FORMAT 5312 - SERVICES - MEDICAL

This format is used to describe general medical requirements. Follow the preparation instructions for Format 1000.

REQUIREMENT ( ) INFORMATION ( ):
Indicate whether each item number submitted is a requirement for support from the support agency or is submitted for informational purposes only. Enter a description of the general medical requirements to be supported for the various phases of the program/mission including bio-science, personnel, standby personnel, and facilities/equipment.

## FORMAT 5313 - SERVICES - PUBLIC AFFAIRS

This format is used to describe procedures for receiving and disseminating general program/mission information to news media representatives and to other support agencies. Follow the preparation instructions for Format 1000.

REQUIREMENT ( ) INFORMATION ( ):
Indicate whether each item number submitted is a requirement for support from the support agency or is submitted for informational purposes only. Enter general information concerning public affairs services. Include such areas as oral communications, radio and television, motion picture, news media, and special releases connected with public affairs. Enter the overall schedule of public affairs events to be covered. Specific requirements must be entered on applicable forms to receive support such as communications, facilities, and photography and may be referenced here. Included are personnel assignments, news media personnel positions, and other public affairs services as applicable.

## FORMAT 5314 - SERVICES - SECURITY AND SAFETY

This format is used by the requesting agency to list requirements for security and safety support services. Services requested on this format are security services, clearances, access control/facility security/secure work area, classified storage, area surveillance/perimeter guards, escort security, police and traffic control, safety services, and safety monitor and control. Follow the preparation instructions for Format 1000.

TYPE ITEM/SERVICE:
Indicate the required item or service.

RA ( )  SA ( ):
Indicate whether the item or service entered in the above entry shall be requesting agency (RA) or support agency (SA) furnished.

DATES OF REQUIRED ITEM/SERVICE:
Enter dates (month and year) for the item or service required.

AMOUNTS OF REQUIRED ITEM/SERVICE:
Enter the amount for each item/service required as applicable.

PURPOSE AND REMARKS/SPECIAL INSTRUCTIONS:
State briefly the need for service requested and include any clarifying remarks which specifically describe the item and amounts shown in previous entries.  Should the required service need special instructions, enter these instructions in this entry.  When applicable, enter the name of the contractors and contract numbers for which this service/support is required.


## FORMAT 5315 - SERVICES - COMMUNITY, EDUCATION, AND FOOD SERVICE

This format is used by the requesting agency to list requirements for community, education, and food services.  Services requested on this format are recreation, chapel and chaplain, bank, library, retail facilities, exchange facilities, community presentations, education, schools (nursery, elementary, high), food services, cafeteria, restaurant, mobile food service, and box lunches.  Follow the preparation instructions for Format 1000.

TYPE ITEM/SERVICE:
Indicate the required item or service.

RA ( )  SA ( ):
Indicate whether the item or service entered in the above entry shall be requesting agency (RA) or support agency (SA) furnished.

DATES OF REQUIRED ITEM/SERVICE:
Enter dates (month and year) for the item or service required.

AMOUNTS OF REQUIRED ITEM/SERVICE:
Enter the amount for each item/service required as applicable.

PURPOSE AND REMARKS/SPECIAL INSTRUCTIONS:
State briefly the need for service requested and include any clarifying remarks which specifically describe the item and amounts shown in entries above.  Should the required service need special instructions, enter these instructions in this entry.  When applicable, enter the name of the contractors and contract numbers for which this service/support is required.


## FORMAT 5320 - SERVICES - UTILITIES (ELECTRICAL, WATER, AND SANITATION)

This format is used by the requesting agency to list requirements for utilities (electrical, water, and sanitation).  Services requested on this format are

| | |
|---|---|
| electric power | water |
| alternating current (ac) | potable/non-potable |
| direct current (dc) | sanitation |
| power converters | restrooms/portable |
| portable power generators | trash collection |
| facility lighting | garbage collection |
| portable lighting | waste disposal |
| janitorial services | |

Follow the preparation instructions for Format 1000.

TYPE ITEM/SERVICE:
Indicate the required item or service.

RA ( )  SA ( ):
Indicate whether the item or service entered in the previous entry shall be requesting agency (RA) or support agency (SA) furnished.

DATES OF REQUIRED ITEM/SERVICE:
Enter dates (month and year) for the item or service required.

AMOUNTS OF REQUIRED ITEM/SERVICE:
Enter the amount for each item/service required as applicable.

PURPOSE AND REMARKS/SPECIAL INSTRUCTIONS:
State briefly the need for service requested and include any clarifying remarks which specifically describe the item and amounts shown in entries above.  Should the required service need special instructions, enter these instructions in this entry.  When applicable, enter the name of the contractors and contract numbers for which this service/support is required.

## FORMAT 5321 - SERVICES - HANDLING, STORAGE, AND DISPOSAL

This format is used by the requesting agency to list requirements for handling, storage and disposal services.  Services requested on this format are

|  |  |
|---|---|
| handling | storage |
| equipment required | warehousing |
| flammable materials | space requirements |
| special materials | temperature and humidity control |
| explosive devices | refrigeration |
| hazardous materials | disposal |
| ordnance |  |

Follow the preparation instructions for Format 1000.

TYPE ITEM/SERVICE:
Indicate the required item or service.

RA ( )  SA ( ):
Indicate whether the item or service entered in the above entry shall be requesting agency (RA) or support agency (SA) furnished.

DATES OF REQUIRED ITEM/SERVICE:
Enter dates (month and year) for the item or service required.

AMOUNTS OF REQUIRED ITEM/SERVICE:
Enter the amount for each item/service required as applicable.

PURPOSE AND REMARKS/SPECIAL INSTRUCTIONS:
State briefly the need for service requested and include any clarifying remarks which specifically describe the item and amounts shown in entries above.  Should the required service need special instructions, enter these instructions in this entry.  When applicable, enter the name of the contractors and contract numbers for which this service/support is required.


## FORMAT 5322 - SERVICES - AIR CONDITIONING AND ENVIRONMENTAL OBSERVATIONS

This format is used by the requesting agency to list requirements for air conditioning and environmental observation services.  Services requested on this format (indoor and outdoor) are portable air conditioning, environmental monitoring (recording and sampling), and acoustical monitoring.  Follow the preparation instructions for Format 1000.

TYPE ITEM/SERVICE:
Indicate the required item or service.

RA ( )  SA ( ):
Indicate whether the item or service entered in the above entry shall be requesting agency (RA) or support agency (SA) furnished.

DATES OF REQUIRED ITEM/SERVICE:
Enter dates (month and year) for the item or service required.

AMOUNTS OF REQUIRED ITEM/SERVICE:
Enter the amount for each item/service required as applicable.

PURPOSE AND REMARKS/SPECIAL INSTRUCTIONS:
State briefly the need for service requested and include any clarifying remarks which specifically describe the item and amounts shown in previous entries.  Should the required service need special instructions, enter these instructions in this entry.  When applicable, enter the name of the contractors and contract numbers for which this service/support is required.  Include power requirements, airflow, and capacity, if known.


**FORMAT 5330  SERVICES - PROCUREMENT, SHIPPING, RECEIVING, AND STOCK CONTROL**

This format is used by the requesting agency to list requirements for procurement, shipping, receiving, and stock control services.  Services requested on this format are:

| | |
|---|---|
| procurement | packing and crating |
| requisitions | loading and trucking (stevedoring) |
| specifications | stock control |
| purchase orders | invoicing |
| work orders | issue and return |
| contract administration | inventory |
| shipping and receiving | |

Follow the preparation instructions for Format 1000.

TYPE SERVICE:
Indicate the required service.

RA ( )  SA ( ):
Indicate whether the service entered in the above entry shall be requesting agency (RA) or support agency (SA) furnished.

DATES OF REQUIRED SERVICE:
Enter dates (month and year) for the service required.

QUANTITY OF REQUIRED SERVICE:
Quantify the service required as applicable.

PURPOSE AND REMARKS/SPECIAL INSTRUCTIONS:
Briefly state the need for service requested and include any clarifying remarks which specifically describe the entries above.  Should the required service need special instructions, enter these instructions in this entry.  When applicable, enter the name of the contractors and contract numbers for which this service/support is required.  Specific items to be procured should be listed on Format 5380.


## FORMAT 5331 - SERVICES - LOCAL PURCHASE OF BASE FUNDED ITEMS

This format is used by the requesting agency to list equipment or supplies to be purchased by the support agency.  Follow the preparation instructions for Format 1000.

NAME/DESIGNATION:
List the equipment or supplies to be obtained by the support agency.

MILITARY SPECIFICATION NUMBER:
Enter the number of the military specification which identifies and defines the entry in NAME/DESIGNATION.

FEDERAL STOCK NUMBER:
Enter appropriate number which identifies the item in NAME/DESIGNATION entry.

UNITS:
Enter the quantity or amount required.

ESTIMATED COST:
Enter the approximate cost of the item required.

QUANTITY REQUIRED/QTR:
Estimate the quantity or amount of the item in NAME/DESIGNATION entry required per quarter for each of the 3 years should the program continue for that period.  Indicate calendar year (CY).

REMARKS:
Enter any remarks necessary to clarify entries made.  List only those procurement items not covered elsewhere in the document.

## FORMAT 5340 - SERVICES - PROPELLANTS, GASES, AND CHEMICALS

This format is used by the requesting agency to list program requirements for propellants, gases, and chemicals.  Follow the preparation instructions for Format 1000.

ITEM NAME/DESIGNATION:
List the test unit propellants, gases, chemicals, lubricants, hydraulic fluids, preservatives, and POL products required.  Do not include items that are covered in the following Format 5300 series.

MILITARY SPECIFICATION NUMBER:
Enter the number of the military specification which identifies and defines the item in ITEM NAME/DESIGNATION entry.

FEDERAL STOCK NUMBER:
Enter appropriate number which identifies the item in ITEM NAME/DESIGNATION entry.

RA ( )  SA ( ):
Indicate whether the item entered in ITEM NAME/DESIGNATION entry shall be requesting agency (RA) or support agency (SA) furnished.

QUANTITY REQUIRED/QTR:
Estimate the consumption quantity (tons, pounds, gallons) of the material per quarter for 3 years, should the program continue that long.  Indicate calendar year (CY).

REMARKS:
Enter additional information, as necessary, to clarify the requirements.  When applicable, enter the name of the contractors and contract numbers for which the service/support is required.

List any of the following propellants, gases, and chemicals, or any others required:

| | | |
|---|---|---|
| ammonia, anhydrous (lb) | IRFTNA (lb) | jet-A (lb) |
| aniline (lb) | propane (lb) | furfurai alcohol (lb) |
| argon (SCF) | methanol (gal) | JP-5 (gal) |
| carbon disulfide (lb) | JP-4 (gal) | JP-8 (gal) |
| ethylene oxide (lb) | freon 12 (lb) | hezane (gal) |
| UDETA (lb) | | |

## FORMAT 5341 - SERVICES - FUELS, LUBRICANTS, AND HYDRAULIC FLUIDS

This format is used to list requirements for aircraft, ground vehicles/equipment and marine fuels.  Follow the preparation instructions for Format 1000.

ITEM NAME/DESIGNATION:
Enter the types of aircraft, ground vehicles/equipment and marine fuels required for conducting operations at the support agency location such as aviation and automotive gas and diesel fuel.  Do not list fuel requirements for any support agency operated equipment.

MILITARY SPECIFICATION NUMBER:
Enter the number of the military specification which identifies and defines the item in ITEM NAME/DESIGNATION entry.

FEDERAL STOCK NUMBER:
Enter appropriate number which identifies the item in ITEM NAME/DESIGNATION entry.

RA ( )  SA ( ):
Indicate whether the item entered in ITEM NAME/DESIGNATION entry shall be requesting agency (RA) or support agency (SA) furnished.

QUANTITY REQUIRED/QTR:
Estimate the consumption quantity (tons, pounds, gallons) of the material per quarter for 3 years, should the program continue that long.  Indicate calendar year (CY).

REMARKS:
Enter additional information, as necessary, to clarify the requirements.  When applicable, enter the name of the contractors and contract numbers for which the service/support is required.


## FORMAT 5342 - SERVICES - CHEMICAL CLEANING

This format is used by the requesting agency to list all requirements for chemical cleaning.  Follow the preparation instructions for Format 1000.

COMPONENT/SYSTEM:
Enter the name/description of all components or systems by proper nomenclature, for example, globe valve and hydraulic pump.  Give descriptive size and constituent material such as Teflon, carbon steel, copper and copper alloys, stainless steel (martensitic, ferretic, austenitic).

Enter the quantity of components and/or systems to be cleaned.

Enter the applicable drawing/specification number for the component/system.  Drawing and specifications are to be provided to the support agency.

CLEANING REQUIREMENT:
Describe the cleaning requirement or reference the applicable cleaning specification.  A list of special tools, if required for specific components, should be included.

SERVICE:
Enter the type of service associated with the use of the component/system, gaseous nitrogen, hydraulic, liquid oxygen, and hydrogen peroxide.

REMARKS:
Enter additional information, as necessary, to clarify the requirement.  When applicable, enter the name of the contractors and contract numbers for which the service/support is required.  Identify any hazard associated with the cleaning process.


## FORMAT 5350 - SERVICES - VEHICLES

This format is used by the requesting agency to list requirements for vehicles and land transportation.  Follow the preparation instructions for Format 1000.

ITEM NAME/DESIGNATION:
Enter the name of vehicles required with appropriate military nomenclature.  Service includes buses and taxis.  Include in REMARKS if vehicle driver is required.  Use Format 5200 series for listing all surface transportation requirements of personnel and cargo.

CAPACITY:
Indicate the capacity in number of passengers and tons.

PURPOSE:
State the purpose for which the vehicle or transportation is required.

PERCENT USED:
Indicate the percentage of use in terms of a 90-day quarter with a 24-hour day (2160 hours).

RA ( )  SA ( ):
Indicate whether the equipment will be requesting agency (RA) or support agency (SA) furnished.

NUMBER REQUIRED/QTR:
Enter the number of vehicles of the same class/type required for each quarter of 3 years, should the program continue that long.

REMARKS - SPECIAL INSTRUCTIONS:
If requirement is long term (over 3 years), enter number of vehicles and duration required in this entry. Indicate calendar year (CY). Include any clarifying remarks or instructions which may be appropriate. When applicable, enter the name of the contractors and contract numbers for which the service/support is required.


## FORMAT 5351 - SERVICES - GROUND HANDLING EQUIPMENT

This format is used by the requesting agency to list requirements for ground handling equipment. Follow the preparation instructions for Format 1000.

ITEM NAME/DESIGNATION:
Enter the name of equipment and ground power units required, with appropriate military nomenclature, if applicable. Include all heavy equipment such as

| | |
|---|---|
| trailers | mobile hoist |
| tractors | high ranger |
| forklifts | tow tugs |
| mobile cranes | dollies |
| weight handling equipment | canister/transporter |


CAPACITY:
Indicate the capacity in numbers.

PURPOSE:
State the purpose for which the vehicle or transportation is required.

PERCENT USED:
Indicate the percentage of use in terms of a 90-day quarter with a 24-hour day (2160 hours).

RA ( ) SA ( ):
Indicate whether the equipment will be requesting agency (RA) or support agency (SA) furnished.

NUMBER REQUIRED/QTR:
This entry is divided to account for the number of same type equipment required for each quarter of 3 years, should the program continue that long. Indicate calendar year (CY).

REMARKS - SPECIAL INSTRUCTIONS:
If requirement is long term (over 3 years), enter number of equipment and duration required in this entry.  Include any clarifying remarks or instructions which may be appropriate.  When applicable, enter the name of the contractors and contract numbers for which the service/support is required.


**FORMAT 5360** - **SERVICES** - **AIRCRAFT**

This format is used by the requesting agency to state requirements for support of its aircraft.  Follow the preparation instructions for Format 1000.

TYPE SERVICE/PURPOSE:
Enter required services and state the need for support not covered elsewhere.  Include any modifications to aircraft, equipment to be installed, or special services.  Maintenance and calibration requirements for requesting agency equipment should be included.

STAGING AREAS AND DATES:
Enter the staging areas where support will be required and the relevant dates by months or quarters and by calendar year.

AIRCRAFT DESCRIPTION:
Enter the type and serial number of the aircraft.  Enter the type fuel, oil, and lubricants for servicing the aircraft, if required.

REMARKS:
Enter any remarks necessary to clarify entries made.


**FORMAT 5361** - **SERVICES - SEACRAFT**

This format is used to describe the services required by the requesting agency seacraft while in harbor.  Follow the preparation instructions for Format 1000.

TYPE SEACRAFT:
Enter the specific type or model designation of the seacraft.

HARBOR:
Enter the name of the harbors wherein the seacraft will be serviced.

DURATION:
Enter in the total number of days per designated calendar year the seacraft will be in the harbor specified in TYPE SEACRAFT entry.  Provide the information for as many years as can be realistically estimated.

SERVICES:
Identify all services not covered elsewhere in the Format 5300 series which are required for the seacraft while in the harbor.  Include requirements for docking facilities, loading and unloading facilities, electrical power, maintenance, and supplies.


## FORMAT 5370 - SERVICES - AIR OPERATIONS

This format is used by the requesting agency to list requirements for air operations services not covered elsewhere in the document.  Services to be requested on this format are

| | | |
|---|---|---|
| flight service | GCA | fueling |
| tower operations | ground support service | aircraft parking |
| scheduling | fire/crash | terminal operation |
| TACAN | aircraft ground - | aircraft maintenance |
| clearance | handling equipment | rescue |

Follow the preparation instructions for Format 1000.

TYPE SERVICE:
Identify the required service.

DATES:
Enter dates (month and year) the service is required.

PURPOSE AND REMARKS/SPECIAL INSTRUCTIONS:
State briefly the need for the service requested and include any clarifying remarks.  Should the required service need special instructions, enter instructions in this entry.  When applicable, enter the name of the contractors and contract numbers for which this service/support is required.


## FORMAT 5371 - SERVICES - MARINE OPERATIONS

This format is used by the requesting agency to list requirements for marine operations not covered elsewhere in this document.  Services to be requested on this format are

| | | |
|---|---|---|
| harbor services | inter-atoll boats | VIP boats |

| harbor control | manning | salvage operations |
|---|---|---|
| channel markers | scheduling | maintenance |
| moorings | personnel transfer | emergency repair |
| wharf docks | underwater demolition | repair parts |
| boat control | surface craft | dock services |
| tug boat operations | search and rescue boats | boat refueling |

Follow the preparation instructions for Format 1000.

TYPE SERVICE:
Identify the required service.

DATES:
Enter dates (month and year) the service is required.

PURPOSE AND REMARKS/SPECIAL INSTRUCTIONS:
State briefly the need for service requested and include any clarifying remarks.  Should the required service need special instructions, enter instructions in this entry.  When applicable, enter the name of the contractors and contract numbers for which this service/support is required.


## FORMAT 5380 - SERVICES - PHYSICAL AND LIFE SCIENCE EXPERIMENTS

This format is used by the requesting agency to list requirements for physical or life science experiments.  This format covers unique support services not covered in other formats of the UDS handbook for processing and handling experiments.  Services requested on this format are

facilities - unique support areas such as user preparation area, X-ray/macrography/micrography processing area, clinical laboratory, animal holding rooms, baseline data collection area, and decompression chambers.

tools and equipment - balances (including analytical), cold traps, optical microscopes, electron microscopes (SEM & TEM), optical comparators, metallographic equipment, incubators, surgical tools, osmometers, gurneys, sonic cleaner, and glassware.

supplies and services - chemical supplies/glassware, crucibles, labware, analytical papers, distillation service, presterilized pipettes (disposable), specimen collection supplies, dissecting instruments, bunsen burner, and gas supply.

Follow the preparation instructions for Format 1000.

TYPE ITEM/SERVICE:
Indicate the required item or service.

RA ( )  SA ( ):
Indicate whether the item or service entered in the above entry shall be requesting agency (RA) or support agency (SA) furnished.

DATES OF REQUIRED ITEM/SERVICE:
Enter dates (month and year) for the item or service required.

AMOUNTS OF REQUIRED ITEM/SERVICE:
Enter the amount for each item/service required as applicable.

PURPOSE AND REMARKS/SPECIAL INSTRUCTIONS:
State briefly the need for service requested and include any clarifying remarks which specifically describe the item and amounts shown in entries above.  Should the required service need special instructions, enter instructions in this entry.  When applicable, enter the name of the contractors and contract numbers for which this service/support is required.


## FORMAT 5400 - **LABORATORY**

This format is used by the requesting agency to specify general laboratory requirements. Follow the preparation instructions for Format 1000.Specific analysis requirements are noted on Format 5410.

REQUIREMENT ( )  INFORMATION ( ):
Indicate whether each item number submitted is a requirement for support from the support agency or is submitted for informational purposes only.  Define the requirement for laboratory support.  Identify general types of tests required.


## FORMAT 5410 - **LABORATORY - CHEMICAL AND PHYSICAL ANALYSIS**

This format is used by the requesting agency to list requirements for chemical and physical analysis.  These services encompass areas such as chemical consultant services, instrumentation analysis, wet chemistry, gas analysis, metallurgical services, contamination and surface corrosion studies, and many other specific chemical problems concerned with a mission/program.  Follow the preparation instructions for Format 1000.

NAME/DESIGNATION:
Indicate the name of the propellant, gas, or chemical for which chemical analysis is required. This entry will not prevent examination of unknowns which may be submitted for analysis at any time.

MILITARY SPECIFICATION NUMBER:
Reference military specifications or other specifications which the item must meet.

DETAILS OF ANALYSIS REQUIRED:
State the chemical and physical analysis required for the item listed. Include specific chemical elements and common or anticipated particles or impurities for which analysis is required. State methods of sampling and analysis if special methods are required.

SAMPLING TIMES:
State when and how often samples and analysis are required and when test results are required.

REMARKS:
Enter additional information, as necessary, to clarify the requirement. When applicable, enter the name of the contractors and contract numbers for which the service/support is required.


## FORMAT 5420 - **LABORATORY** - **SPECIAL ENVIRONMENT**

This format is used to describe unique environmental requirements with respect to data storage; quarantine of personnel; sample, equipment, or experiment handling; or working conditions; for example, requirements for film storage, quarantine of space travelers, handling of lunar or planetary samples or lighting requirements for work or photography. Follow the preparation instructions for Format 1000.

REQUIREMENT:
Describe the nature of the item requiring a special environment. Give details of required atmosphere, thermal properties, radiation, shielding, lighting intensity, or any other parameter required to define the environment.


## FORMAT 5430 - **LABORATORY - CALIBRATION**

This format is used to plan and to schedule test instrument calibration on a periodic basis. Each missile or vehicle contractor and subcontractor, requesting agency, and organization which requires maintenance and calibration service for its precision electronic or mechanical test instruments will list its instruments on this format. Follow the preparation instructions for Format 1000.

PRECISION ELECTRONIC OR MECHANICAL MEASURING EQUIPMENT
NAME/DESIGNATION:
Identify the precision electronic or mechanical measuring instrument which will be used at the support agency location (multimeter, voltage meter, frequency meter)

RANGE OR SCALE AND UNITS:
Enter the ranges or scales of each item listed. Indicate the unit of measure, (dcV, acV, A).

NAME OF MANUFACTURER:
Enter the name of the manufacturer of the instrument listed.

MODEL NUMBER:
Enter the model number of the instrument listed.

SERIAL NUMBER:
Enter the serial number of the instrument listed.

CALIBRATION:
Enter the desired calibration cycle in months and the number of days allowed for the calibration of the instrument listed. Indicate whether the instrument listed will require calibration in place. If yes, complete the information required under ACCURACY REQUIRED.

ACCURACY REQUIRED:
Enter the accuracy required if other than the manufacturer's recommended or stated accuracy.

UNITS:
Enter a 3-year forecast of the number of units of the instrument requiring calibration service. The first quarter of the forecast will be the quarter in which the first instruments will be submitted for calibration. Indicate calendar year (CY).

REMARKS:
Enter additional information, as necessary, to clarify the requirement. When applicable, enter the name of the contractors and contract numbers for which the service/support is required.


## FORMAT 5440 - LABORATORY - TECHNICAL SHOPS AND LABS

This format is used by the requesting agency to list requirements for technical shops and laboratory services. Technical services include electrical, mechanical, optical, photo, chemical, and others.

Follow the preparation instructions for Format 1000.

TYPE SERVICE:
Identify the required service.

DATES:
Enter dates (month and year) for service required and estimated number of days per month service is required.

PURPOSE AND REMARKS/SPECIAL INSTRUCTIONS:
State briefly the need for service requested and include any clarifying remarks.  Should the required service need special instructions, enter instructions in this entry.  When applicable, enter the name of the contractors and contract numbers for which this service/support is required.


## FORMAT 5500 - **MAINTENANCE**

This format is used by the requesting agency to specify general maintenance requirements (exclusive of equipment requiring calibration).  Follow the preparation instructions for Format 1000.

REQUIREMENT ( )  INFORMATION ( ):
Indicate whether each item number submitted is a requirement for support from the support agency or is submitted for informational purposes only.  Enter the requirements for shop services such as sheet metal fabrication, carpentry, painting, welding, and machining.  Include estimate of the number of hours for each type shop service required, if known.

## FORMAT 5510 - **MAINTENANCE - BUILDINGS AND GROUNDS**

This format is used by the requesting agency to list requirements for buildings and grounds maintenance.  Services to be requested on this format are building maintenance (carpentry, plumbing, electrical, air conditioning/heating, painting, and janitorial) and grounds maintenance (labor and equipment).  Follow the preparation instructions for Format 1000.

TYPE SERVICE:
Identify the required service.

DATES:
Enter dates (month and year) the service is required.

PURPOSE AND REMARKS/SPECIAL INSTRUCTIONS:
State briefly the need for maintenance requested and include any clarifying remarks. Should the required maintenance need special instructions, enter instructions in this entry.  When applicable, enter the name of the contractors and contract numbers for which this maintenance is required.

## FORMAT 5520 - **MAINTENANCE - VEHICLES**

This format is used by the requesting agency to list requirements for vehicle maintenance. Follow the preparation instructions for Format 1000.

TYPE SERVICE:
Identify the required service.

DATES:
Enter dates (month and year) the service is required.

PURPOSE AND REMARKS/SPECIAL INSTRUCTIONS:
State briefly the need for maintenance requested and include any clarifying remarks. Should the required maintenance need special instructions, enter instructions in this entry.  When applicable, enter the name of the contractors and contract numbers for which this maintenance is required.

## FORMAT 5530 - **MAINTENANCE - SHOP**

This format is used by the requesting agency to list requirements for maintenance shop services.  Examples of services to be requested on this format are machine shop, fabrication, welding, and soldering.  Follow the preparation instructions for Format 1000.

TYPE SERVICE:
Identify the required service.

DATES:
Enter dates (month and year) the service is required.

PURPOSE AND REMARKS/SPECIAL INSTRUCTIONS:
State briefly the need for maintenance requested and include any clarifying remarks. Should the required maintenance need special instructions, enter instructions in this entry.  When applicable, enter the name of the contractors and contract numbers for which this maintenance is required.

**FORMAT 5600 - FACILITIES**

  This format is used by the requesting agency to specify the assignment, reassignment, or programming of facilities.  Follow the preparation instructions for Format 1000.

LOCATION:
Indicate the location (installation, island).

TYPE OF FACILITY:
List facilities to include such items as

administrative space  electrical power    blockhouses
hangar      runway and/or skid strip  missile static checkout pads
shops and laboratories  missile assembly (buildings) static engine run pads and
open storage   aircraft ramp space   compass rose
launch pads    warehouses     loading pits or ramps
guidance buildings

SITE DESIRED:
Indicate specific area where the facility is required.

STATUS:
Indicate by checking in the appropriate entry whether the requested facility has already been assigned to the program, whether it is an existing facility, or whether an entirely new facility must be constructed.

SCHEDULE:
Indicate the schedule for facility occupying requirements.  Indicate calendar year (CY).

REMARKS:
Enter additional information, as necessary, to clarify the requirement.  When applicable, enter the name of the contractors and contract numbers for which the service/support is required.  In units of 1000 square feet, enter the net usable space required for each type in the applicable CY half-year.  Include with the space requirement the estimated number of occupying personnel, for example, 2.5/16.


**FORMAT 5610 - FACILITIES - DRAWINGS**

  This format is used to provide drawings which complement the requirements presented on Format 5600 - Facilities.  Follow the preparation instructions for Format 1000.

REQUIREMENT:
Enter a plot plan showing the desired location of the individual facility requirement for each item listed on Format 5600.  Specify how each facility is related to other items.  Cross reference all of the drawings, reports, site plans, letters, and preliminary design criteria which are submitted directly to the support agency as a detailed definition and description of the utilities and scope of facilities required.


## FORMAT 5620 - FACILITIES - LAUNCHER AND PLATFORM CHARACTERISTICS

This format is used to provide a description of the launcher and platform characteristics.  Follow the preparation instructions for Format 1000.

TYPE OF LAUNCH PAD/PLATFORM:
Indicate land, ship, or plane, stationary or portable.

SIZE OF LAUNCH PAD/PLATFORM:
Enter overall dimensions.

LOCATION OF LAUNCH PAD/PLATFORM:
Enter pertinent launcher location requirements, for example, location with respect to coastline for landbased or underwater platforms.

TYPE OF SIMULATOR:
If a launch platform simulating ship, submarine, or other launch platform will be required at the support agency location, indicate type.  State if simulator to be used at the support agency location is to be furnished by the requesting agency (RA) or support agency (SA).

DESCRIPTION OF LAUNCH PAD/PLATFORM:
Describe pertinent launch pad or platform characteristics, for example, construction, special instruments, special power requirements, and cooling water.

TYPE OF LAUNCHER:
Enter launcher type (zero length, rail).  Indicate whether launcher will be furnished by the requesting agency (RA) or support agency (SA).

SIZE OF LAUNCHER:
Enter overall dimensions of launcher.

LAUNCHER WEIGHT:
Enter launcher weight.

LAUNCHER AZIMUTH:
Enter launcher azimuth arc in degrees, desired accuracy of launcher position, and
required accuracy of launcher position.

LAUNCHER ELEVATION:
Enter launcher elevation as referenced to horizontal, desired accuracy of launcher
position, required accuracy of launcher position.

DESCRIPTION OF LAUNCHER:
Describe pertinent launcher characteristics (construction, special features,
maintenance).

DESCRIPTION OF LAUNCH OPERATION:
Describe briefly and in sequence the tasks involved in placing the missile on the
launcher and in preparing the missile for launch.  Include salvo launch preparation (if
any), dry runs, and captive A/A, A/S tests.

DESCRIPTION OF POSITIONING METHODS AND EQUIPMENT:
Describe the methods and equipment used to position the launcher in azimuth and
elevation and for measuring launcher position.


## FORMAT 6000 - OTHER SUPPORT

This format is used by the requesting agency to specify support requirements not
covered in other UDS formats.  Follow the preparation instructions for Format 1000.

REQUIREMENT ( )  INFORMATION ( ):
Indicate whether each item number submitted is a requirement for support from the
support agency or is submitted for informational purposes only.  Define the support for
requirements not previously stated in the document.


## FORMAT 6010 - OTHER SUPPORT REQUIREMENTS FOR SUPPORT AGENCIES

This format is used by the lead range/support agency to list support needs to other
support agencies to accomplish requesting agency requirements.  Follow the
preparation instructions for Format 1000.

REFERENCE UDS FORMAT/ITEM NUMBER:
Enter the UDS format number and requirement item number of each support agency
requirement in this entry.

REQUIREMENT:
Enter the support requirements categorically (metric data, telemetry recording, communication recording).  Specific requirements for the support agency must be identified if they consist of only a portion of the total requirement above.

DATA PRIORITY:
Indicate whether the data requirement is mandatory (M), required (R), or desired (D).  (See UDS Handbook, chapter 3, paragraph 3.2 for further explanation of priority.)

COMMENTS:
Enter any appropriate comments identifying the requirement by the UDS format/item number for each entry.  Enter support agency requirement if it is levied by the lead range/support agency.

**FORMAT - GENERAL**

This format is used anywhere in the document where narrative or graphic data cannot be presented on the prescribed numbered format.  It may also be used to supplement the prescribed format when additional space is required for expanded data entry.

(UDS SECTION NO. - TITLE):
Enter the UDS format number and title from the UDS document outline for the appropriate section used.

    ITEM NO.:
    REQUESTER:
    SUPPLIER:
    TEST CODE:
    REQUIREMENT ( )  INFORMATION ( )

Indicate whether each item number submitted is a requirement for support from the support agency or is submitted for informational purposes only.  Enter the requirement or information desired.